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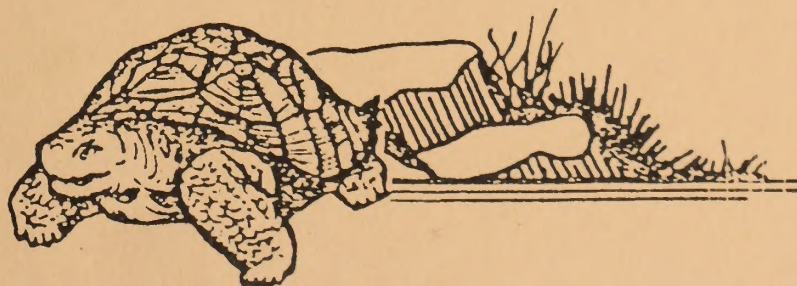
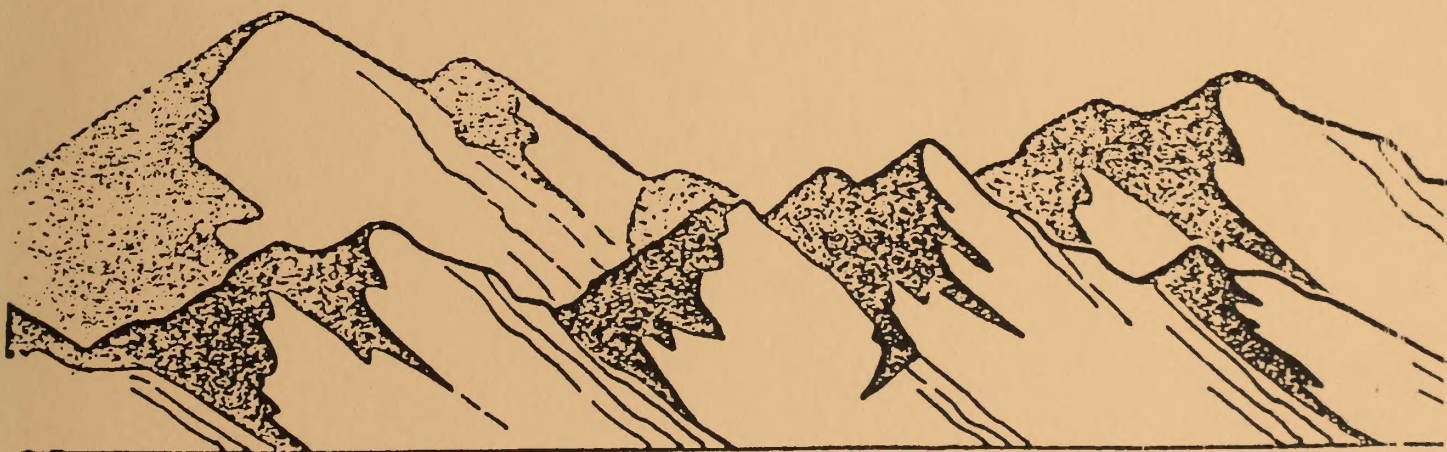
United States Department of the Interior
Bureau of Land Management
California Desert District
Ridgecrest Resource Area

August 1993



Final

Rand Mountains
Fremont Valley
Management Plan



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Rand Mountains Fremont Valley Management Plan

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Management Plan
for the
Rand Mountains - Fremont Valley Area
(A Sikes Act Plan -- PL 93-452)

Prepared by:

Richard S. Smith

Staff Chief
Ridgecrest Resource Area
Bureau of Land Management

August 10, 1993
Date

Recommended by:

Red Salamy

Area Manager
Ridgecrest Resource Area
Bureau of Land Management

8/17/93
Date

Approved by:

Kevin R. Bean

District Manager
California Desert District
Bureau of Land Management

12/17/93
Date

George D. Nokes

George D. Nokes
Regional Manager, Region 4
California Department of Fish and Game

11/16/93
Date

Fred Worthley

Fred Worthley
Regional Manager, Region 5
California Department of Fish and Game

10/12/93
Date

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RECORD OF DECISION

Decision:

In conformance with the California Desert Conservation Area Plan (1980, as amended), Chapter 3, the Bureau of Land Management has prepared the Rand Mountains - Fremont Valley Management Plan for that special management area. This Plan conforms to the CDCA Plan and complies with the regulations of 43 CFR 1600. This Plan was developed with the input of a technical review team of affected and interested representatives assembled for that purpose. The planning process included consensus development among those represented, as well as input from public meetings and other sources.

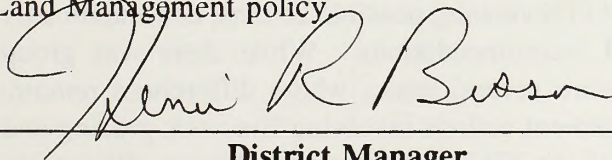
The preparation of the Plan was identified as needed in the CDCA Plan to protect sensitive resource values in the area. The recent listing of the desert tortoise as endangered by the U.S. Fish and Wildlife Service (USFWS) both emphasized the need for and heightened the urgency of this plan. The Plan developed contains both adequate prescriptions for the enhancement of sensitive species while allowing for continued multiple uses where appropriate. The listing and precarious condition of the desert tortoise species mandates immediate and positive management to protect its future.

In their Biological Opinion of March 10, 1993, the USFWS concluded that this Plan is not likely to jeopardize the continued existence of the desert tortoise. The Plan will be revised as necessary to conform with the Desert Tortoise Recovery Plan and West Mojave Coordinated Management Plan.

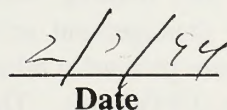
This Plan does not include grazing since that use will be evaluated under a separate study and consultation. The environmental assessment and supplement prepared to analyze this action adequately addresses the impacts involved. Therefore, the proposed plan, which is also the proposed action in the environmental assessment, is adopted as the BLM's decision.

Finding of No Significant Impact:

Based upon the analysis of the potential environmental impacts of the proposed action and alternatives, it has been determined that the proposed action would not result in significant impacts to the human environment. The preparation of an environmental impact statement is not required, pursuant to the regulations of the Council on Environmental Quality and Bureau of Land Management policy.



District Manager



Date

PREFACE

This management Plan for the Rand Mountains/Fremont Valley area was developed because of complex management issues affecting public lands through that region. This area is considered to be the evolutionary home of the desert tortoise and the location of the highest desert tortoise population density throughout their range.

The western portion of the management area was designated as the Western Rand Mountains Area of Critical Environmental Concern in 1980 because of the indigenous desert tortoise population conflicting with surface use activities. Then in the late 1980s, field research demonstrated that the desert tortoise was experiencing drastic losses and that potential management options had to be evaluated to determine possible ways to stop, and if possible, reverse the population decline.

In late 1988, the Bureau of Land Management initiated the development of this management plan. In addition to gathering available information and conducting public meetings, a Technical Review Team (TRT) was formed to assist in this plan's preparation. The nine member's of this TRT were selected both for their specific knowledge of the area and as key representatives of various user groups and organizations seeking to assure desert tortoise survival.

In developing this management plan, the BLM conducted four public meetings, distributed draft plans twice for public review, and conducted seven TRT meetings. The TRT extensively reviewed all available data, was briefed by resource specialists, and conducted an in-depth field evaluation of the management area.

The Rand TRT members devoted long hours of their own time and worked diligently to assist the BLM to develop this management plan. Consensus does not come easy. The constituents represented by the TRT members hold tightly to public land management philosophies that at times are mutually exclusive. The TRT members are then faced with the dilemma of explaining compromises that were obtained through long, intensive negotiations. Successful TRT's are totally dependent on the individual members having first, the total support of their constituents and second, developing mutual respect for each other.

All the TRT members supported management actions and use restrictions which they felt were demonstratively helpful for protecting the threatened desert tortoise population and its habitat. The TRT was extremely helpful to BLM personnel in reviewing possible actions, conscientiously discussing options, and making well considered recommendations. While there was group consensus on many management actions, there were several issues where differences remain. These differences were primarily related to management actions involving livestock grazing and off-highway vehicle (OHV) use. The opinions of the TRT members varied from eliminating

grazing and off-highway vehicle use to reduced and restricted grazing and off highway vehicle use. On these issues, management actions were left for BLM determination.

The TRT members requested the opportunity to meet annually to evaluate the plan's effectiveness and make recommendations for needed future Plan revisions. The BLM plans to continue requesting the assistance of the TRT on an annual basis to help review and amend the Plan as needed, based on changing conditions and analysis of the plans effectiveness.

EXECUTIVE SUMMARY

The BLM Ridgecrest Resource Area staff prepared the Rand Mountains - Fremont Valley Management Plan for a 65,020 acre area of public land located 35 miles south of Ridgecrest and immediately north of the California City boundary. This Plan is necessitated by the severe losses of desert tortoises in an area of historically high native desert tortoise population. Research is showing that cumulative impacts of a respiratory disease, raven predation, illegal collection, shooting, vehicles, and grazing are responsible for the decline. In addition, several years of drought has compounded the effects of these impacts.

In response to the severity of the losses occurring in the desert tortoise population, the BLM instituted an interim quarantine prohibiting all public entry on the western portion of the management area and a vehicle closure on the remaining Plan area. These temporary restrictions remained in effect until this Plan was completed. This Plan is written to identify management actions which will best protect and stabilize the existing indigenous desert tortoise population and attempt to reverse the population decline. The over-riding goal is protection and enhancement of the desert tortoise and its habitat. Other multiple use activities are prohibited or allowed to continue in ways and at reduced levels which will not adversely affect the desert tortoise population and its habitat.

Members of the public, other agencies, various organizations, and a nine member Technical Review Team have been extremely helpful in generating information and evaluating proposed actions. Through the course of developing this plan, 88 management actions, as specified in Chapter V, were determined as needed and justified for the preservation of the desert tortoise. Some interim implementation of actions necessary for protecting the desert tortoise population have occurred. Work on implementation of all 88 Plan actions will begin with the approval of this plan.

The existing West Rand Mountains ACEC will be expanded an additional 13,120 acres into Fremont Valley. This will result in additional Category 1 habitat being included inside the ACEC. Multiple use activities in the ACEC will be severely restricted to provide maximum protection for the desert tortoise and its habitat.

Livestock grazing is being evaluated under a separate study and separate Section 7 consultation with the USFWS. There is a 74 percent reduction in the miles of vehicle routes outside the ACEC and a 90 percent reduction in the miles of vehicle routes inside the ACEC which has resulted in the elimination of 635 miles of roads and trails. The overall 83 percent reduction in the miles of routes open to vehicle use will allow for rehabilitation of 222 acres and reduce the number of visitors using the area. An 18-mile fence will be constructed along the southern boundary to limit vehicular access to entry points where there is a designated open route.

All camping is prohibited inside the ACEC and vehicles used for camping outside the ACEC are restricted to five designated camping sites or within 25 feet of open routes. All shooting is prohibited except for use of shotguns for upland game hunting to reduce the shooting of desert tortoises. The raven monitoring and control program will be expanded to reduce raven predation on juvenile desert tortoises.

The ACEC and an additional area in Fremont Valley covering a total of 32,590 acres will be withdrawn from mineral entry. Closure to mineral operations will reduce impacts on desert tortoise habitat from mining operations.

The BLM consulted with the USFWS on this Plan as required by the Endangered Species Act. In their Biological Opinion of March 10, 1993, additional Terms and Conditions were provided. These have been incorporated into the Plan and a Supplemental Environmental Assessment prepared. The USFWS determined that formal consultation would be required for some of the management actions listed in Chapter V. Each of the management actions in Chapter V identified by USFWS as requiring formal consultation have been identified with a (+).

The management decisions in this Plan are only another step taken by the BLM in marshaling management actions for the critical desert tortoise habitat area which exists in the Rand Mountains and Fremont Valley region. The intensive research being conducted and the effectiveness of individual Plan actions will necessitate continual review and Plan modifications in response to changing conditions and needs.

The TRT and resource specialists will continue to be utilized to review and assist the BLM in making Plan revisions. As new data indicates, additional positive steps will be taken to enhance the desert tortoise population's viability. The BLM will immediately react in all ways possible to assure their quick implementation.

This Plan will be modified as necessary to conform with the Desert Tortoise Recovery Plan and the Western Mojave Coordinated Management Plan, once they are finalized.

I. INTRODUCTION

A. PURPOSE

The purpose of this Plan is to identify the necessary land management actions to enable the Bureau of Land Management (BLM) to meet the goal of ensuring that viable population or populations of the desert tortoise continue in the Rand Mountains/Fremont Valley Management Area. Since the BLM and California Department of Fish and Game (CDFG) are jointly involved in protecting the desert tortoise, this plan will provide management guidelines for use by both agencies. This Plan will form the basis for a Sikes Act agreement, which will allow for enforcement and funding assistance from the CDFG.

In developing this plan, the BLM formed a Technical Review Team (TRT) to assist in reviewing data and making recommendations for managing this area. The TRT was composed of representatives from various agencies and groups which are directly involved or interested in public land use in the management area. A listing of the TRT members and the agency or group which they represent is provided in the Appendix C. Their report provided important guidance for developing this plan.

Actions needed to meet management goals will generally be constraints on those land uses believed to adversely affect the desert tortoise and its habitat. The BLM will continue to manage the public lands under the principles of multiple use and sustained yield, and will allow uses which are compatible with protection of the desert tortoise population.

Due to severe declines in many desert tortoise populations throughout their geographic range, the desert tortoise has been identified by both the USFWS and the California Department of Fish and Game (DFG) for protection. The USFWS listed the desert tortoise as endangered throughout its range under an emergency listing 1989 and permanently listed the desert tortoise as a threatened species on April 2, 1990.

The DFG state listed the desert tortoise as a threatened species in June, 1989. The BLM is mandated by federal law in response to this listing to take protective actions for the desert tortoise. BLM is actively managing public land and restricting uses within the Rand Mountains - Fremont Valley Management Area to provide for the protection, enhancement, and continued existence of viable desert tortoise populations.

B. GEOGRAPHIC ORIENTATION

The Rand Mountains/Fremont Valley Management Area is located in the southern portion of the Ridgecrest Resource Area of the BLM's California Desert District (CDD). The area consists of approximately 65,020 acres (Table 1) including the Rand Mountains, Fremont Valley, and Koehn Dry Lake. Major access to the area is provided by the Randsburg/Red Rock Road and the Randsburg/Mojave Road via Highway 14, the Garlock Road, and U.S. 395. The communities of Randsburg, Johannesburg, Red Mountain, and Atolia are located on the east side of the management area. California City borders the area along its entire southern boundary, and the city of Ridgecrest is located 35 miles to the north.

Table 1

LAND OWNERSHIP DATA WITHIN THE MANAGEMENT AREA

<u>Owner</u>	<u>Approximate Acreage</u>
United States (Public Land)	60,370 acres
CDFG Land	640 acres
Private	4,018 acres
TOTAL	65,020 acres

C. CALIFORNIA DESERT CONSERVATION AREA PLAN

The CDCA Plan (1980) designated an Area of Critical Environmental Concern (ACEC) and a Wildlife Habitat Management Area (HMA) within the management area. These two units are the West Rand Mountains ACEC, covering 16,320 acres and the Western Mojave Crucial Habitat for the desert tortoise and the Mojave ground squirrel, which covers the entire management area. The Mojave ground squirrel is a state-listed threatened species (Department of Fish and Game 1980). The Desert Tortoise Natural Area (DTNA) is another ACEC designated under the CDCA Plan and is adjacent to the management area on the southwest side as shown in Illustration 3.

The management area covered by this Plan is relatively small compared to the 12-million acres of public land in the CDCA, but it is the only area within the Fremont-Stoddard desert tortoise Category I habitat that consists of a large block of contiguous public lands (see goals for Categories I, II, and III in Table 2 below). Much of the remaining habitat is in a checkerboard pattern, with alternating sections of private and public lands.

Table 2

GOALS FOR DESERT TORTOISE HABITAT CATEGORIES

Category I Habitat Areas - Maintain stable, viable populations and protect existing tortoise habitat values. Increase populations where possible. Category I Habitat Areas are essential to maintain large, viable populations.

Category II Habitat Areas - Maintain stable, viable populations and halt further declines in tortoise habitat values. Category II Habitat Areas may be essential to maintenance of viable populations.

Category III Habitat Areas - Limit tortoise habitat and population declines to the extent possible by mitigating impacts. Category III Habitat Areas are not essential to maintain viable populations.

The location of this management area is shown on Illustrations 1 and 2. Land ownership status is shown on Illustration 3. The current land use classifications as established under the California Desert Conservation Area Plan (CDCA) are shown in Illustration 4.

This Plan will also consider a zone of private land surrounding the DTNA to further protect this important habitat from undesirable land uses along the boundary. A more complete description of the management area, including summaries of the resources and land uses, is contained in subsequent portions of this Plan and appendix.

The management area is known to contain habitat supporting high densities of the desert tortoise. The densities in the mid to late 1970s were generally estimated to be in excess of 250 tortoises per square mile. This management area was identified as a major portion of the Fremont-Stoddard highly crucial desert tortoise habitat area (Bureau of Land Management 1980).

D. MANAGEMENT FRAMEWORK

1. Early Management Activities

Prior to 1972, the major activities in the management area were hunting, OHV use (both casual use and competitive events), sheep grazing, some prospecting and mineral development, rockhounding, photography, educational outings, and enjoyment of wildflowers. In 1972, support was developed for establishing the DTNA for the protection of the desert tortoise and its habitat in the area to the southwest of this management area.

In 1973 the BLM implemented the Interim Critical Management Program for Vehicle Use on the California Desert. This program designated the DTNA, an area of public land north of California City and south of Koehn Dry Lake as closed to all vehicle use to protect wildlife habitat. The DTNA contained the highest known existing density of desert tortoises. The remainder of the Rand Mountains and Koehn Dry Lake was designated as open which allows vehicle travel anywhere in the area if the vehicle is operated responsibly in accordance with vehicle use regulations.

The El Paso Management Framework Plan (El Paso MFP, 1976) was approved in 1976. This Plan recommended that the Rand Mountains and Fremont Valley remain "open" to vehicle use and competitive events. Also, the Plan recommended designation of the DTNA and that the land between the Koehn Lake and the proposed DTNA be considered for addition to the proposed Natural Area. The DTNA was officially designated in 1980 in the El Paso Management Plan.

2. Federal Land Policy and Management Act of 1976 (FLPMA, 1976)

In this legislation Congress established the CDCA and directed the BLM to develop a comprehensive land use Plan to " . . . provide for the immediate and future protection and administration of the public land in the California Desert within the framework of multiple use and sustained yield, and the maintenance of environmental quality." FLPMA also calls for the identification and designation of ACECs.

3. California Desert Conservation Area Plan and ACEC

Upon completion of the CDCA Plan the BLM designated the DTNA as an ACEC, one of 74 such units within the CDCA at the time the Plan was finalized. The West Rand Mountains ACEC was designated as ACEC 74 in the Addendum to

Appendix II for the Final Environmental Impact Statement for the CDCA Plan. The purpose of the designation was to protect desert tortoise habitat. These two ACEC areas are shown in Illustration 4.

The ACEC designation process is not only a recognition program, but includes implementation of protective measures as well. Such protection is to be provided on a continuing, priority basis as specified in Section 202(C)(3) of FLPMA.

Special management requirements, as specified in the CDCA Plan, became effective at the time the CDCA Plan was finalized in 1980.

Management requirements for ACECs are not constrained by the general Multiple Use Class (MUC) guidelines in the CDCA Plan. There were four MUCs established in the CDCA Plan. The following three MUCs occur in the management area as shown in Illustration 4: Class I (Intensive Use), Class M (Moderate Use), and Class L (Limited Use). Management actions for ACECs are to include those that are necessary to meet the goal for the area, regardless of MUC designation.

4. Policies and Plans

In 1988, the BLM issued a policy for management of desert tortoise habitat on public lands. This policy called for the designation of three categories of desert tortoise habitat based upon tortoise populations and degree to which conflicting uses can be reduced through management action. The goal under the policy is to maintain healthy, viable populations of desert tortoises on public lands in Categories I and II, and to increase populations in Category I where possible and described in Table 2.

Categorization of tortoise habitat within the management area as directed by this policy is proposed in the 1989 amendments to the CDCA Plan.

5. Desert Tortoise Natural Area (DTNA) Management Plan

The DTNA ACEC Plan was completed in 1977 and updated in 1979 and again in 1988. The Plan requires full protective management of the desert tortoise population and its habitat.

6. Ecological Reserve

One square mile of Category I habitat for the desert tortoise in Fremont Valley was acquired recently by the CDFG. This area was designated as an Ecological Reserve

by the California Fish and Game Commission to provide protection for the Mojave ground squirrel and the desert tortoise, both state-listed threatened species. Public entry and use of Ecological Reserves are regulated by the California Fish and Game Commission. The following public uses are prohibited:

- Mining
- Collecting (except by permit from the Department)
- Vehicle use off designated access roads
- Firearm use or possession of weapons except by licensed hunters when hunting is specifically authorized (including bow and arrow)
- Entry between sunset and sunrise (except by permit from the Department)
- Grazing (except by permit from the Department)
- Camping
- Pets (except on leash)

7. Desert Tortoise Habitat Management on the Public Lands: A Rangewide Report

The purpose of the "Rangewide Report" (November 1988) was to implement the recommendations contained in a BLM report entitled "Management of Desert Tortoise Habitat," approved by the BLM Director on October 15, 1987. The goal of this report is "to manage habitat so as to ensure that viable desert tortoise populations exist on public lands. This will be accomplished through cooperative resource management aimed at protecting the species and its habitat." The BLM is committed to maintaining viable tortoise populations in Category I and II habitats through the implementation of specific management actions. Management actions were grouped under 14 Management Objectives (see Appendix E for complete list).

8. Desert Tortoise Listed As Endangered

The desert tortoise became federally listed as an endangered species under an emergency listing by the USFWS on August 4, 1989. Under the provisions of the Endangered Species Act, all actions on Federal land, if permitted, must be mitigated so as not to cause further decline of habitat and reduction of the species population.

This places special constraints on all authorizations and activities approved by the BLM to ensure that desert tortoise populations are protected. Formal consultation with the USFWS was conducted and on March 10, 1993, the USFWS issued a non-jeopardy opinion for the Plan. The opinion included Terms and Conditions which have been incorporated into this Plan. A supplemental EA was written and included under Appendix I - Environmental Assessment and Supplement. It was determined that Plan actions will reduce impacts to the desert tortoise. Specific project authorizations will continue to be required to ensure that required stipulations are developed.

E. PUBLIC INVOLVEMENT

Identification of issues and formation of proposed actions involved extensive public input through two public scoping meetings and the activities of the TRT. Representatives on the team included the full range of interests: OHV recreation, grazing, mining, local government, wildlife, and general conservation. A total of six meetings were held between August 1988 and August 1989. Through review of the data provided by staff and discussion of the options for resolving issues, the team reached consensus on 14 of the 22 Plan recommendations.

During the scoping phase of the program, the general public was invited to special meetings to assist staff and the TRT in the identification of issues. The general public was later given the opportunity to review a preliminary draft Plan which identified alternatives developed by the TRT. There were 109 copies of the preliminary draft Plan sent out for public review, and the BLM received 14 responses to the initial draft. In general, the responses provided differing opinions on the type and degree of use restrictions which were needed for desert tortoise protection. Several people responded that the scientific data currently available did not justify proposed restrictions. Other respondents stated that all activities having possible deleterious effects on the desert tortoise should be stopped. Several respondents requested additional maps in the Plan to better illustrate areas of proposed restrictions and crucial tortoise habitat. In response, changes were made in the Plan which included more detail of proposed actions, more maps to locate proposed actions, and detailed explanations of why the various management actions were selected.

On December 20, 1989, 220 copies of the preliminary draft Plan were sent out for a 60 day public review period which ended on February 20, 1990. The BLM received 53 letters with written comments about the preliminary Plan during the public comment period. Also during this 60 day public review period, two public

meetings were held for the purpose of reviewing and discussing the preliminary draft plan. On January 8, 1990, at the Ridgecrest public meeting, 28 issues were discussed and at the January 9, 1990, public meeting in Riverside, 36 issues were discussed.

Following the public review period, a seventh TRT meeting was held on March 16-17, 1990, to review all the public comments and make recommendations on changes needed to finalize the plan. A summary of the public comments and the changes which resulted are summarized in Appendix E.

II. BACKGROUND AND RESOURCE SUMMARY

A. BACKGROUND

The CDCA Plan was approved in 1980. During the resource inventory for this plan, it was determined that in addition to the DTNA, the Rand Mountains and Fremont Valley were crucial tortoise habitat, with the Fremont Valley having a tortoise density of greater than 250 per square mile. Therefore, the public land within the management area was divided into three Multiple Use Classes as shown in Illustration 4. The DTNA and the western Rand Mountains were designated Multiple Use Class L (Limited Use) to protect the desert tortoise. The land to the south of Koehn Lake was designated Class L to protect the riparian habitat and wildlife at the marsh. The lakebed of Koehn Dry Lake was designated Multiple Use Class I (Intensive Use) because of present and proposed mining operations. The remainder of the area to the east was designated Multiple Use Class M (Moderate Use) to provide for vehicle access for recreation, grazing management, and mineral exploration.

Within this area, the CDCA Plan also designated the DTNA as an ACEC for the protection of the high-density desert tortoise population. Based on public comments regarding wildlife and off-highway vehicle use and the existence of crucial desert tortoise habitat in western Fremont Valley, the 16,320-acre West Rand Mountains ACEC was also designated. The West Rand ACEC designation was made to ensure that measures would be taken in managing the area to protect the desert tortoise. The Rand Mountains-Fremont Valley Management Plan has been developed with goals and management actions which would facilitate and enhance the original purpose of the West Rand ACEC in protecting the desert tortoise.

The Wildlife Element of the CDCA Plan also specified that Habitat Management Plans (HMPs) were to be developed to prescribe management for desert tortoise habitat in five areas, including the Western Mojave (including all of the Rand Mountains/Fremont Valley Management Area). Under BLM policy, all such HMPs are to be prepared cooperatively with the CDFG under the authority of the Sikes Act (Public Laws 93-542 and 95-420).

B. RESOURCE SUMMARY/EXISTING SITUATION

This section summarizes the resource activities presently occurring in the management area. For a detailed discussion of resources, refer to APPENDIX A.

1. Wildlife

Several important wildlife species are found in the management area. Among these are the desert tortoise, Mojave ground squirrel, burrowing owl, desert kit fox, golden eagle, prairie falcon and chukar. The desert tortoise has been listed as a threatened species by DFG and by the USFWS due to drastic population declines. Many factors, including an epidemic respiratory disease, drought conditions, raven predation, shooting, collecting, and vehicle kills are contributing to the decline.

The Mojave ground squirrel is also a state-listed threatened species which occurs throughout the management area. The desert kit fox, golden eagle, prairie falcon and burrowing owl are fully protected species and occur throughout the management area. Chukar are an introduced game bird species and are highly popular for hunting. Fifteen guzzlers were constructed within the management area during the 1960s and early 1970s to help increase chukar populations.

2. Geology-Energy-Minerals

Four basic rock types occur in the management area. These are recent alluvial deposits, dissected alluvium and terrace deposits, quartz monzonite, and schist. Mineral interest in the management area is high, particularly for gold and other locatable minerals.

There are no known deposits of energy-related minerals or current oil and gas leases within the management area. Leasable minerals including sodium and possibly borate minerals occur on or near Koehn Dry Lake. There is one inactive lease and one active lease on the lake.

The management area encompasses a portion of the historical Rand and Atolia Mining Districts which existed primarily for gold, silver, and tungsten. There are 1,739 lode, placer and millsite claims concentrated in the eastern portion of the management area. There are currently three active operations permitted by Plans of Operations and sixteen operations authorized through Notices of Intent.

Currently, three active building material quarries operate within the management area, primarily in the Rand Schist formation.

3. Grazing

Livestock grazing has occurred in the management area for approximately 120 years. Numbers have decreased since 1870, when nearly one million sheep grazed the area, to about 20,000 to 30,000 today. Several large cattle operations also

grazed in the area until about 1930.

Currently, the management area is totally within the Cantil Allotment which has 15 sheep operators. Most of the grazing within the management area occurs along the south and east sides.

4. Vegetation

A large diversity of plant species have been identified within the management area. Generally, they can be classed into the creosote bush-scrub, creosote bush-rocky slopes, Joshua tree woodland and alkali sink scrub vegetative communities. It is generally perceived that total vegetative cover has decreased through OHV use and livestock grazing. As a result, a number of invasive herbaceous species have been introduced to the management area.

5. Recreation/Access

The management area has been used intensively for at least the last 25 years by OHV enthusiasts. The numerous roads and trails have made this a popular area for both OHV competitive events and casual use. See Illustration 5 which shows the existing inventory of all vehicle routes in the management area. The inventory is based upon routes shown on topographic maps, aerial photos, other maps, and ground-truthing but may not show every route. Since 1980, BLM policies under the CDCA Plan have restricted vehicle use to existing routes with some route closures to protect wildlife guzzlers. The heaviest recreational use occurs in the west and southwest portion of the management area and on lands immediately north of California City. There has been a decline in competitive events since 1975 with a high of 25 events with 10,845 participants, to a low of one event in 1988 with 151 participants.

The area is also popular for hunting upland game birds, target shooting, car camping, photography, wildflower viewing, and rock collecting. The area is rated as mostly average visual quality with some below average landscape at Koehn Dry Lake and the south side of the Rand Mountains.

6. Lands/Realty

Use of the lands in the management area by the public and agencies varies from moderate to heavy activity. This use is derived from the population centers of California City, Randsburg, Red Mountain, Johannesburg, and the infrastructure of power lines, roads, communications sites, etc., in support of these communities and communities outside of the management area. Major paved and unpaved roads are

located throughout the area with utility corridors along the periphery of the management area. The Randsburg Community Water District has existing water wells and pipelines within the management area.

7. Cultural Resources

No cultural resources or cultural sites are known to exist within the management area. However, no detailed field inventories of cultural values have been done.

III. MANAGEMENT ISSUES

The major management issue for the management area has focused on the desert tortoise population which has significantly decreased in numbers in recent years. This decrease is the result of a variety of factors including disease, raven predation, and a combination of human activities within the western Mojave region. A detailed list of specific issues developed during the scoping phase of the program is included in Appendix B.

The following is a summary of these issues:

- Determine what overall management actions are needed to protect and enhance the desert tortoise population.
- Consider expansion of both the DTNA and West Rand ACEC.
- Consider specific measures necessary to protect tortoise populations and habitat related to recreation, mining, and grazing.
- Consider further need for the acquisition of private lands within or adjacent to the ACEC.
- Consider benefits of this Plan for other sensitive resources.
- Evaluate how planned management actions will affect other traditional uses and what traditional multiple-uses can be continued without negative impacts to the desert tortoise.

IV. MANAGEMENT GOALS

A. DESERT TORTOISE POPULATIONS

1. Reverse the downward trend in the tortoise population, prevent from dropping below 15 adults per square mile.
2. Increase the breeding population to 100 tortoises per square mile¹ within 65 years (3 percent annual rate of increase, beginning with 15 per square mile). In realistic terms, achieve measurable increases in density of breeding tortoises each time monitored. At 3 percent would expect to have 18 by 1996, 21 by 2001, 24 by 2006, 28 by 2011, up to the goal by 2056.
3. Establish and maintain a viable population of desert tortoises over the next 500 years.
4. Reduce harassment, collecting and shooting of desert tortoises.
5. Reduce the loss of desert tortoises resulting from vehicle hits.
6. Eliminate unauthorized collection of desert tortoise.

B. DESERT TORTOISE HABITAT

1. Ensure that the habitat is managed to protect, restore, and enhance the desert tortoise population.
2. Promote recovery of vegetation and soils.

C. FLORA AND FAUNA

1. Manage the ecosystem of the management area which will maintain it in a condition to improve natural features and biological diversity.

¹Figure from U.S.F.W.S. Draft Recovery Plan, 1993

D. MINERALS

1. Provide for mineral development with mitigation to protect the desert tortoise population.

E. GRAZING

1. Allow carefully managed grazing within the planning area pursuant to ongoing consultation with USFWS.

F. RECREATION

1. Allow for continued recreational use and access which results in minimal impacts on the desert tortoise population and habitat.

G. LANDS

1. Allow land and realty actions which have adequate mitigation requirements which will protect the desert tortoise or require suitable compensation.
2. Promote lands and realty actions, such as land exchanges and purchases to consolidate desert tortoise habitat under public ownership by Federal or state agencies.

H. ACCESS

1. Within the existing and expanded ACEC, reduce the miles of existing vehicle routes by 90 percent, while providing minimal vehicle access for recreation and other uses, consistent with protection of the desert tortoise and desert tortoise habitat.
2. Throughout the management area, allow vehicle use on open routes for recreation and other purposes, while ensuring the protection of the desert tortoise population and its habitat.

V. MANAGEMENT ACTIONS

For the following management actions, a (*) denotes full TRT consensus and (#) are BLM staff proposals. All of these actions comply with California Desert District policy as stated in Instruction Memorandum 89-52 dated February 23, 1989, and would not conflict with CDCA Plan decisions.

Since the desert tortoise is federally listed as threatened, consultation with the USFWS on this Plan is required under the Endangered Species Act. The BLM has consulted with the USFWS regarding this Plan and its affect on the areas' desert tortoise population. The USFWS determined that a Formal Section 7 Consultation is necessary to finalize this plan, and issued a Non-Jeopardy Opinion in the Biological Opinion. The USFWS has identified the construction projects in this Plan which will require formal consultation. **The management actions listed in Chapter V of this Plan which will require formal consultation with USFWS are denoted with a (+).** Prior to any implementation actions being started on actions denoted with a (+), the BLM will consult with the USFWS. Changes identified through formal consultation will then be applied when implementing each (+) management action.

A. ADMINISTRATIVE ACTIONS

1. CDCA Plan Amendments

Amend the California Desert Conservation Area Plan as follows (Goals A, B, F, and H):

- a. Expand the West Rand ACEC by 13,120 acres (see Illustration 6).#
- b. Change the Class M lands in the ACEC expansion area and adjacent alluvial fan areas to Class L (see Illustration 6).
- c. Designate 32,590 acres within the management area as withdrawn from mineral location and entry. The 6,090 acre Koehn Lake and an additional 8,320 acres within the management area will remain as Class M and open to mineral entry (see Illustration 7).*
- d. Close the entire management area to OHV use except for 129 miles of designated open routes as shown in Illustration 8.#+ Designated vehicle routes shall be clearly signed on the ground. Closed routes shall

be signed, barricaded, or obliterated as needed to prevent illegal vehicle use. The Desert Access Guides covering this area of the CDCA shall be revised to reflect these changes in vehicle use restrictions.

- e. Categorize desert tortoise habitat as shown in Illustration 9.#
- f. Enhance compliance with Plan restrictions and BLM regulations through increased enforcement presence in the management area. Shift BLM Ranger assignments to provide maximum coverage possible. Enforcement patrols shall be increased to a minimum of eight hours per week, plus eight hours each weekend from March 1 to June 30, September 1 to November 1, and holiday weekends. Develop cooperative arrangements with other regional law enforcement agencies to assist in enforcement of state and county codes (e.g., speed limits, leash of domestic dogs, littering, etc.).
- g. Use aerial observation flights to monitor the area and identify unauthorized activities.

Discussion

Many management actions detailed later in this Plan necessitate CDCA Plan amendments in order to be implemented. It will be necessary to reclassify lands (i.e., M to L) to be consistent with guidelines as set forth in the "Rangewide Plan" (November 1988) for Category I habitat.

2. Camping on Private Lands

Develop an agreement with California City and Kern County to manage the camping and unregulated OHV use occurring in locations on private land south of the management area, such as Park C where spillover affects the ACEC and in popular undeveloped car camping areas along the southern portion of the management area.*

Discussion

This action is fully supported by the Rand TRT and is within CDD policy. Currently, one of the greatest impacts to the management area is from OHVs coming up from camping areas such as Park C (located adjacent to the management area on the southwest side) and other car camping sites located on private land to the south of the management area. Controlling the camping in these areas will enhance BLM's ability to manage OHV use on public lands in the adjacent

management area. Implementation of this action will contribute to meeting Objectives 1 (Management Actions 1B and E), 5 (Management Actions 5C and D), 7 (Management Action 7C), and 9 (Management Action 9C) of the "Rangewide Plan" (November 1988).

B. WILDLIFE AND WILDLIFE HABITAT

1. Desert Tortoise Populations (Goal A)

- a. Through increased education and field enforcement, work to stop the return of any captive desert tortoises to the management area. Release of captives into the wild is a violation of the Endangered Species Act.*#
- b. Reduce raven predation by expanding the pilot raven monitoring and control program to include removal of ravens feeding on tortoises, especially during season when tortoises are active. Work with area communities to manage the garbage and dumpsters to reduce availability to ravens.*#
- c. Determine if wildlife water facilities (guzzlers) and livestock water troughs increase tortoise predation.#
- d. Continue existing trend plot studies every four years.#
- e. Develop secondary trend evaluation techniques specifically for this area.#
- f. Establish study and research test plots to address special problems and to evaluate management effectiveness. This Plan will be modified as new data becomes available.#
- g. In the future, develop recommendations to arrest spread of the respiratory disease found in desert tortoises. (At this time, information is lacking to do this.)#
- h. Where appropriate and feasible, construct tortoise fences and road underpasses to channel tortoise migration and travel away from major roadways.

- i. When destruction of active burrows is unavoidable, mitigations for actions such as mining will require relocation of tortoises as close to their homesite as possible.+
- j. When appropriate, require temporary fencing to keep tortoises out of construction areas and remove fence upon completion.*
- k. Reduce harassment and shooting of desert tortoises.
- l. Reduce death loss resulting from vehicle kills through vehicle use restrictions. #

Discussion

All of these actions received full Rand TRT consensus (*) or are BLM staff proposals (#) and are within CDD policy (CDD-89-52, February 23, 1989). Raven predation, vandalism, and disease, among others, have collectively contributed to the dramatic decline in tortoise numbers. Preventing the returning of captives would reduce the spread of disease within the management area. Implementation of these actions will contribute to meeting Objectives 2 (Management Actions 2A, B, C, D, and F), 3 (Management Actions 3A), 4 (Management Actions 4A and B), 6 (Management Action 6B), 7 (Management Actions 7E and G) and 13 (Management Actions 13A and B) of the "Rangewide Plan" (November 1988).

2. Desert Tortoise Habitat (Goal B)

- a. Boundary adjustments
 - Acquire additional private lands surrounding the DTNA to expand the protected habitat area to promote the establishment of viable populations of the desert tortoise.*
 - Acquire private lands along the southern boundary of the management area to provide a linear boundary between California City and the DTNA, and to provide a corridor for tortoise movements.*
 - Expand the existing West Rand Mountains ACEC to include additional tortoise habitat in Fremont Valley and adjacent to Koehn Lake on the east side.*#

- Acquire approximately 80 acres of private land in the northwest corner of the West Rand Mountains ACEC that results in a significant indentation in the management area boundary.*
- Acquire approximately 700 acres of private land in the northeast corner of the management area to square the management area boundary.*
- Require full mitigation and/or compensation² for new projects throughout the management area that would result in impacts to the tortoise or tortoise habitat.*+
- Develop and implement a long-term program to rehabilitate existing and acquired lands in Category I.*+

Discussion

There was only partial consensus by the Rand TRT on these actions. These are a combination of actions resulting from TRT consensus, CDD policy and California State Director initiatives. Further consideration and deliberation regarding expansion of the DTNA should occur. This concept was discussed in some depth by the Rand TRT. However, there was no final decision as to whether to recommend an expansion of the DTNA. Further expansion of the DTNA would result in permanent removal of existing grazing and OHV use, therefore not meeting Goal D for grazing that the TRT had agreed to. Expansion of the West Rand ACEC and the proposals to acquire private lands adjacent to the DTNA denote the importance of the additional lands to the successful management of the desert tortoise habitat. Implementation of these actions would contribute to meeting Objectives 7 (Management Actions 7B and E) and 8 (Management Actions 8A and B) of the "Rangewide Plan" (November 1988).

C. GRAZING

Grazing in the area will be adjusted pursuant to Section 7 consultation with USFWS on ephemeral sheep grazing throughout the California Desert District and subsequent CDP amendments. +

²Compensation means full replacement for lost resources in an area off the project site. Compensation should be in the form of habitat enhancement, land acquisition in Category 1 or 2 areas, studies, or funds. Refer to the Compensation Formula in the document entitled "Recommendations for Management of the Desert Tortoise in the California Desert." This document will be used to determine compensation amounts.

Grazing, if allowed, would be managed for the enhancement of the tortoise.

D. ACCESS (+)

1. OHV Route Network

Implement an OHV route network which will reduce the miles of existing routes in the ACEC by 90 percent and outside the ACEC by 74 percent. The OHV route network shown in Illustration 8 is designed to provide access through management and provide interesting riding opportunities on existing routes while eliminating many redundant routes. The remaining routes provide opportunities for loop trips, and point-to-point travel through the area. No competitive OHV events will be allowed in the management area. Some administrative vehicular use of non-designated routes may be allowed. Such use will be kept to the minimum possible and may include limited vehicular access for maintaining wildlife guzzlers.

2. ACEC expansion area (Goals A, B, C, and H).

- a. Implement the designated OHV route network as shown in Illustration 8. This network totals 38 miles of routes which is a 90 percent reduction in 406 miles of existing routes within the ACEC. The closure of 368 miles of route will result in the rehabilitation of 127 acres of land area.
- b. Institute a Desert Plan Amendment to implement the vehicle closure and the designated vehicle route access network as shown in Illustration 8.#
- c. Open routes within the closed area will be signed "Open Route," maintained when necessary for continued use, and numbered to correspond with the Desert Access Guides. Closed routes will be blocked off and the 222 acres of closed routes rehabilitated as much as possible.#
- d. Establish a monitoring study to determine the interaction between motorized vehicle use and the desert tortoise.#

3. Outside the expanded ACEC in the Class M and L areas (Goals A, B, C, E, and H) as shown in Illustration 6

- a. Manage the remainder of the management area as "closed" for motorized vehicles with designated open routes of travel. The 91 miles of routes shown on Illustration 8 outside of the ACEC will be the approved open route network. The designation of 91 miles of routes is a 74 percent reduction in the existing 358 miles of route. This 74 percent reduction will result in the rehabilitation of 93 acres of land. All routes which may exist on the ground that do not meet the definition of a route of travel and all other routes which are not considered necessary to support existing use levels will also be closed to OHV use. The BLM will work to block off and initiate reclamation on the closed routes.
- b. Designated open routes which are also primary routes will be signed and numbered to correspond with the Desert Access Guides. Some primary routes will also continue to be periodically graded by the BLM. Closed routes will be barricaded, and/or obliterated, and if appropriate signed as closed. These routes will be rehabilitated and revegetated to the extent possible, initially targeting closed routes at the junctions with designated routes.

Discussion

See discussions for Chapter V, sections A and B. The TRT did not reach consensus on motorized vehicle use of the management area. Instead, the TRT provided the BLM with a range of options for consideration in developing management actions. The management actions, as shown, compromise between exclusion of OHV use as advocated by some TRT members and an 80 percent reduction in routes in the existing West Rand ACEC as advocated by other TRT members (refer to the Rand TRT Report). The objective selected for the ACEC expansion area is a 90 percent reduction in the miles of routes available for vehicle use with a 74 percent reduction in the remaining portion of the management area. This reduction in access would result in an overall reduction in visitor use of the management area.

Rehabilitation of closed routes will provide additional wildlife habitat while a reduction in visitor use will reduce adverse impacts related to harassing, shooting, and vehicle use. It was the group consensus that these reductions be implemented as soon as possible to maximize the positive benefits. An 90 percent reduction of routes in the expanded ACEC would result in a reduction of 368 miles of route and

rehabilitation of at least 127 acres of desert tortoise habitat. Closure of 74 percent of the routes outside the expanded ACEC would result in a reduction of 267 miles and rehabilitation of 93 acres. Additional benefits will accrue to the lands adjacent to the trails and roads that are closed. Studies have indicated a "drainage effect" of incidental OHV use up to a mile from heavily used vehicle routes.

Those vehicle routes remaining open will provide a base level of access for recreation and other uses. Coupled with reductions in camping, shooting, grazing and mining, this reduced vehicular access should be beneficial to desert tortoise populations. Allowing greatly reduced vehicle use through the expanded ACEC will provide OHV users the opportunity to continue to enjoy their pastime while greatly reducing impacts. Continuing to allow vehicles on half of the existing routes in the remainder of the management area will provide consistency with recent management actions and provides the opportunity to reduce the proliferation of redundant routes. Signing of the open routes will provide OHV users with the means of identifying the routes on the ground. Signing, barricading, or obliterating closed routes will be helpful to the public and enhance enforcement.

Providing opportunities for visitor use within the management area outside the expanded ACEC will help to accommodate both existing recreation use demand and use displaced from the expanded ACEC. As the management area currently receives substantial recreation use, it is essential to provide a location to help accommodate the displaced use. During the development of this plan, an interim quarantine and vehicle closure was put into effect until this Plan could be finalized. More significant restrictions could displace this use to other areas of desert tortoise habitat and other sensitive resources. Establishment of monitoring programs will determine access needs in the area and will also evaluate the effect of access on the desert tortoise.

All these actions are within CDD policy (February 1989). Implementation of these actions will contribute to meeting Objectives 2 (Management Action 2B, C, and F), 3 (Management Action 3A), 6 (Management Action 6B), and 7 (Management Actions 7B, C, D, and F) of the "Rangewide Plan" (November 1988).

E. RECREATION

1. Organized vehicle use (Goals A, B, C, E, and H)

a. Expanded ACEC area:#

- Allow vehicular access pursuant to D.+ ACCESS
 - Prohibit competitive off-highway vehicle events.
- b. Outside of the Expanded ACEC (Class L&M):#
- Allow vehicular access pursuant to D.+ ACCESS.
 - Do not allow OHV competitive events within the Management Area.
 - Do not allow mass start areas, pit areas or camping within Category I or II habitats.

Discussion

See discussion for D. ACCESS

The TRT could not reach consensus on vehicle use in the management area. The management actions allow vehicular use under tight restrictions. The monitoring studies will provide data to determine if the restrictions are successful in mitigating conflicts between OHV users and the tortoise. The studies will provide a solid information base to guide future management decisions. Implementation of these actions will contribute to meeting Objectives 2 (Management Action 2B), 3 (Management Action 3A), 6 (Management Action 6B), 7 (Management Actions 7B, C, D, and E), and 9 (Management Actions 9A, B, and C) of the "Rangewide Plan" (Nov. 1988).

2. Other Recreational Uses (Goals A, B, C, E, and H)

a. Hunting:

- No firearms may be discharged except for the use of shotguns during the fall and winter hunting seasons for upland game birds (September 1 through January 31).*#
- Allow hunting only in the upland and mountainous habitat in the Class M and Class L ACEC areas shown on Illustration 10.*
- Do not allow discharge of rifles or handguns at anytime of the year.

- Allow vehicular access for hunting pursuant to D. ACCESS.#
- No target shooting will be allowed.
- b. Camping:
 - No camping inside the ACEC
 - Allow vehicular access for camping at designated sites along open routes outside the ACEC pursuant to D. +
- c. Access
 - Restrict vehicles used for camping and parking purposes to the designated camping sites established outside the ACEC. These will be signed and will be previously disturbed camping areas.
 - Do not allow camping (vehicular or backpacking) in the expanded ACEC.*#
 - Parking in the management area shall be limited to campgrounds and within 25 feet of designated vehicle routes.
 - All trash and food items at designated campgrounds shall be promptly contained and regularly removed from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.
- d. Use of Special Recreation Permits (SRPs) for authorizing non-OHV events, such as equestrian, running, mountain bikes, etc., can be considered throughout the year. Proper mitigation stipulations will be used to assure that any authorized organized events do not impact the desert tortoise population.

Discussion

Allowing use of only shotguns for upland game hunting will reduce the incidence of desert tortoise shooting. The TRT was in full agreement on the need to stop all casual target shooting and all hunting except for upland game during hunting season. Prohibiting camping in the expanded ACEC and restricting vehicle camping to designated camping areas outside the ACEC will help reduce impacts on the desert tortoise. This restriction reduces the presence of people and the

potential for harassment or inadvertent disturbance of the desert tortoise population. See discussion for D. ACCESS.

These actions have full TRT consensus and are within CDD policy. Implementation of these actions will contribute to meeting Objectives 7 (Management Actions 7C, D, and E) and 9 (Management Actions 9A, B, and C) of the "Rangewide Plan" (November 1988).

F. LANDS AND REALTY (Goals A, B, C, and G)

1. Utility Corridors

- a. Allow only for designation of the existing power line right-of-way corridor (Corridor P) paralleling U.S. 395 pursuant to the CDCA Plan. Existing service roads used for maintenance along these existing power lines will continue to be available for use by the utility companies.*

2. Rights-of-Way (ROW) and Land Use Permits +

- a. Allow new applications but limit impacts with additional special mitigation (such as reducing raven perching opportunities on telephone and power lines and requiring underground placement when possible) and/or compensation requirements to specific sensitive resources.* Any new right-of-way will be evaluated for its impact to the desert tortoise, and if it may affect the desert tortoise, formal consultation pursuant to section 7 of the Act shall be initiated with the USFWS.
- b. For overhead telephone and power lines, reduce raven perching opportunities in crucial habitat and require underground placement when possible.*
- c. For site developments, reduce hazards of project through required mitigation measures which can include use of tortoise-proof fences.*+
- d. All existing ROW's and associated service roads will be allowed to continue. The Randsburg Community Water District has several wells, pipelines, and other water supply facilities within the management area which will be allowed to continue without interruption.

3. Acquisitions, Exchanges, Leases, and Sales*

- a. Retain all public land within the management area in Federal ownership (excluding mine patents).*
- b. Acquire private land areas as shown on Illustration 11 through exchange, purchase, and as compensation for loss of tortoise habitat outside the management area.* These lands shall be managed for the benefit of the desert tortoise.

4. Other

Encourage state, county, and local agencies to adopt and assist in implementing BLM's policies to protect and enhance tortoise populations and habitat in the management area. Work to have other agencies include land acquisition and other tortoise mitigation under CEQA measures.*

Discussion

These actions received full consensus from the Rand TRT and are within CDD policy (February 1989). These actions will ensure there is no net loss of tortoise habitat through actions of the BLM. Working with other local and federal agencies will elevate awareness and knowledge of the desert tortoise and its needs.

Implementation of these actions will contribute to meeting Objectives 5 (Management Actions 5B, C, and D), 7 (Management Actions 7B, C, D, and E), and 8 (Management Actions 8A, B, C, D, and E) of the "Rangewide Plan."

G. MINERALS ACTIONS (Goals A, B, C, F, and H)

1. Locatable Minerals

Institute a partial withdrawal of the management area except for Class M lands and the eastern portion of the Class L area on the south side of the Rand Mountains. This will close most of the desert tortoise habitat valley and bajada areas (i.e., best tortoise habitat) from mineral location and entry (see Illustration 7). Manage the remaining area under the present policies and regulations.*

2. Saleable Minerals

No mineral material sales or removal will be allowed in the management area except for expansion of existing sites within already disturbed areas and to accommodate emergencies such as flash floods (see Illustration 7).*+ In these emergency actions, and only when use of material from existing sites would jeopardize life or property, removal of material for highway maintenance during flash floods or other emergency actions may occur in new sites if a biological monitor is on-site to ensure minimal impacts to desert tortoises and their habitat.

3. Leasable Minerals

Reject mineral leasing applications requiring surface occupancy or impacts within the management area. Limit exploration activity which would cause surface disturbance. Koehn Dry Lake is the exception and will continue to be managed under normal policies and procedures.*

Discussion

These actions received full support of the Rand TRT and are within the CDD policy. These actions will minimize damage to highly crucial tortoise habitat and will minimize conflict.

H. MAINTENANCE AND FACILITIES

1. Facilities (Goals A, B, and H)

- a. Construct a fence along the common southern boundary of the management area and the city limits of California City eastward to the Mojave-Randsburg Road and then along the north side of the road as shown on Illustration 10. Fencing must be constructed to eliminate or significantly reduce raven and raptor perching opportunities.*+
- b. Designate limited access points through this fence into the management area.#
- c. Install information signs and kiosks as shown on Illustration 10 at the designated entry routes into the management area to identify restrictions and sensitive resources.* The status of the desert tortoise and protection afforded by the Endangered Species Act will also be covered.

- d. For all construction activities, surveys for tortoises will be conducted, consistent with USFWS protocol. Sites which yield desert tortoise sign and for which desert tortoises may be affected shall be subject to the terms and conditions in Appendix J.

2. Maintenance

- a. Grade the major designated access routes and boundary roads in the management area as needed during periods of non-emergence in December and January.*+
- b. Pack-it-in/pack-it-out program will be stressed for solid waste disposal.*
- c. Program for additional personnel necessary for the implementation of this plan.#
- d. Develop a memorandum of understanding with the County of Kern addressing County road maintenance activities in the management area. This memorandum shall stipulate measures needed to protect desert tortoises and their habitat from road maintenance activities.

Discussion

These actions received full consensus of the Rand TRT and are within the CDD policy (February 1989). Construction of the fence is critical to the successful management of the area regardless if OHV use is allowed to continue or not. Currently, there is a high concentration of camping in the vicinity of Park C which is adjacent to the southwest corner of the management area. The campers come to the area to specifically ride their OHVs in the Rand Mountains. As a result, there is extremely high, unregulated use of much of the management area. Constructing the fence and delineating entrance points will guide the OHV users to designated routes which will enhance the enforcement of the closure. Installation of the information signs and kiosks will provide information to the public regarding the sensitive nature of the management area.

Maintenance of the facilities and area is self-explanatory. Grading of the primary open routes encourages use of these routes over rougher routes. This also serves to clearly identify those designated routes.

Implementation of these actions will contribute to meeting Objectives 7 (Management Actions 7C and D) and 9 (Management Actions 9A and C) of the "Rangewide Report" (November 1988).

I. OTHER RESOURCES AND ACTIONS

1. Vegetation Harvesting (Goals A and B)

Prohibit the sale of plants, plant parts and/or harvesting/collection of plants within the management area.*

2. Law Enforcement (Goals A-H)

Increase enforcement of regulations in the management area:

- Maintain a minimum of eight hours patrol per week, year round, plus eight hours each weekend from March 1 to June 30 and September 1 to November 1 and holiday weekends.*
- Work with county sheriff's office and California Department of Fish and Game for greater enforcement on holidays and long weekends, and during the hunting season.*
- Schedule aerial surveillance flights as needed.*
- Require compliance with the county leash law for all domestic dogs. Eliminate all feral dogs in the management area.*

3. Hazard Statement

Reduce hazards to both human and tortoise populations:

- Construct tortoise-proof fences and, where feasible, provide culvert underpasses for the Red Rock-Randsburg Road, Garlock Road, Randsburg-Mojave Roads.*
- Fence with tortoise-proof fencing, fill, or modify pits, mine shafts, wells, and agricultural use areas.* A BLM biologist would inspect all prior to filling and remove any tortoises to safety.
- Allow no major surface disturbing activities, such as new road construction, etc., from March 1 to June 30 each year.#+
- Conduct pre-construction briefings of all work crews using public land

to increase knowledge and understanding of tortoises, habitat requirements, and restrictions.#

- Require habitat rehabilitation and vegetation restoration of disturbed areas.#
- Where warranted and possible, require temporary fencing to keep desert tortoises out of construction areas and remove fence upon completion.*
- Tortoise-proof fencing would follow standards established under the small-mining Consultation package. These include having the fence 18" above ground and 12" below ground, supported sufficiently to maintain its integrity. Material should be 1/2" or 1" hardware cloth or similar material. A biological monitor would be present during construction of the fence.

4. Volunteers, Grants, Etc. (Goals A and B)

- a. Utilize volunteer groups in projects to improve tortoise habitat, mark trails, etc.*
- b. Pursue grants and private contributions to support management actions.*

Discussion

These actions either received full consensus from the Rand TRT or were proposed by BLM Staff. All are within CDD policy. Implementation of these actions will contribute to meeting Objectives 1 (Management Actions 1A and E), 2(Management Actions 2A and F), 3(Management Action 3A), 5 (Management Action 5B), 7 (Management Actions 7C, D, and E), 8 (Management Action 8E(2)) of the "Rangewide Plan" (November 1988).

VI. PLAN MONITORING AND IMPLEMENTATION

A. MONITORING

Monitoring studies are designed to determine if the management objectives identified in the Plan are being met. Monitoring will include checks on compliance with the plan, recording information on outside influences such as climate, numbers of sheep authorized to graze, off highway vehicle use, tortoise predation and diseases, and measurements on resource responses to management actions.

The following monitoring in Table 3 is specified for the Rand Mountain/Fremont Valley Plan area. Additional details on the monitoring methods, including type of data collected, rationale for choosing the method and techniques on conducting the studies can be found in the Ridgecrest Resource Area Monitoring Plan (BLM 1986), Appendix F, and the BLM rangeland monitoring manuals (BLM 1984).

2. Use Supervision

- a. The management area will be checked weekly during the grazing season to verify compliance with stipulations and to monitor use patterns.
- b. Permittees grazing in the management area will plot the movements of their sheep on maps provided by BLM.
- c. Rangers on patrol in the management area will identify any bands of sheep encountered and will document locations.
- d. Recreation compliance monitoring will be the key to successful visitor use management of the management area. Reports will be prepared annually in September, coinciding with reports from other resource monitoring efforts and the Recreation Information Management System (RIMS) report. These reports will be based upon findings made during regular inspections during the year. Inspections will be the responsibility of rangers, outdoor recreation planners, and other resource personnel as assigned.

The report will include:

- 1) a detailed description of the area's condition
- 2) an analysis of user trends
- 3) a discussion of the causes of the improvement or decline in resource conditions in light of condition/trend monitoring

Table 3

MONITORING PRESCRIPTIONS

<u>Method</u>	<u>What Measured</u>	<u>Location By Map Number</u>	<u>Interval</u>	<u>Remarks</u>
Climatological	Temperature; Precipitation	4 sites	continuous	
Photo Trend Plots	Trend in Vegetation	6 sites	yearly	Use oblique photographs; p e r m a n e n t sites
Tortoise/Burrow Studies (TABS)	Impacts to burrows and grazing	11 sites	semi-annually	Permanent 1 ha. plots
Line Intercept	Trend; Cover Composition	11 sites	5 years	One at each TABS site
Quadrant Frequency	Trend; Cover Composition Frequency	11 sites	5 years	Use same permanent transect end points as line intercept
Ephemeral Studies	Production Composition	Area Wide	to open range then biweekly	Use standard techniques Append. H (1-2)
Tortoise Studies	Population Trend and Mortality	Area Wide	4 years	Use standard techniques Append. H (4)
Aerial Photo	Habitat Condition	Area wide	5 years	1:24000 scale

- 4) an evaluation of the effectiveness of the proposed actions in this plan,
- 5) suggestions and recommendations of corrective measures where necessary. Standard patrol and incident reports will be utilized to record monitoring observations. Photographs of signing, physical improvements and closed trails will be utilized to assist in monitoring the effectiveness of management actions.

During this monitoring program, any level of adverse impact or degradation of the management area or features of the management area will require immediate attention. Physical closing of new unauthorized trails, hill climbs, etc., will take place at the first opportunity to mitigate the problem.

3. Report to the U. S. Fish and Wildlife Service

The BLM shall provide the USFWS with annual monitoring reports by the end of each calendar year. These reports shall summarize:

- a. Tortoise censuses of the Fremont Valley Plot
- b. Human use and compliance
- c. Aerial photo (every five years)
- d. Summary of monitoring results (see Table 3)
- e. Take of tortoises for management area
- f. An OHV compliance zone map, showing areas of severe, light/moderate, light, and excellent compliance (similar to those presented during Informal Consultation) shall be presented. Methodologies for categories shall require concurrence from the USWFS and be summarized in the first annual report.
- g. Summary of all construction activities during monitoring year, with description of effectiveness of desert tortoise mitigation measures implemented.
- h. Recommendations for modifying or refining these terms and conditions to enhance desert tortoise protection and reduce needless hardship on the BLM of project proponents.

- i. Actual acreage of desert tortoise habitat disturbed from implementing the management plan.

B. IMPLEMENTATION

Table 4 shows the implementation schedule and estimated workload.

Table 4

IMPLEMENTATION SCHEDULE AND ESTIMATED WORKLOAD**Administrative Actions**

	<u>Fiscal Year</u>	<u>WM's</u>
BLM/DFG approval	93	.2
Preliminary Consultation-USFWS:	Completed	
Final USFWS Consultation:	Completed	
District Advisory Council Review	94	.1
<u>Federal Register Notice:</u>	93	.1
-vehicle closure and designated routes		
-shooting closure except for hunting		
-limited camping		
Print Final Plan	93	.2
CDCA Plan Amendments	93-94	.2
MOU with California City & Kern County	94	.2
Law enforcement	93	.3
TRT conduct annual Plan update	93	.5
Mineral withdrawal	94-?	.4
Visitor Use MOU with California City	94	.2
Education programs for workers	93	.2
Designate Category 1 habitat	94	.2
MOU for road work with Kern County	94	.2

Monitoring

Prepare Annual Monitoring USFWS Report:	94	.2
-Compliance map		
-Plan effectiveness and modification needs		
Desert tortoise study and monitoring	93	.3

Compliance and Enforcement

Ranger Patrol:	93	4
-Minimum of 8 hours per week		
-Plus 8 hours each weekend in Spring and Fall		
-Holiday weekends		
-CMA with Kern County and California City		
Bi-annual aerial monitoring	93	.2

Projects

South boundary fence:		
-Cadastral survey	Completed	
-Survey and design, EA	Completed	
-Construction	93-94	5
Land Acquisitions:		
-Negotiation	94-?	
-Appraisal	95-?	
-Acquire	95-?	
Signs and Kiosks:		
-Design and location	Completed	
-Installation	Completed	
Breeding Areas:		
-Determine areas and location	93	.3
-Survey and design, EA	95-?	.2
-Construction	95	2
Raven Control:		
-EIS CDP Amendment	Completed	
-Control numbers	93	.3
Route Management:		
-Signing	93-?	3
-Obliterating	93-?	2
-Barricading	93-?	1
-Rehabilitate closed routes	93-?	2
-Grade and maintain primary routes	As Needed	

Other Actions

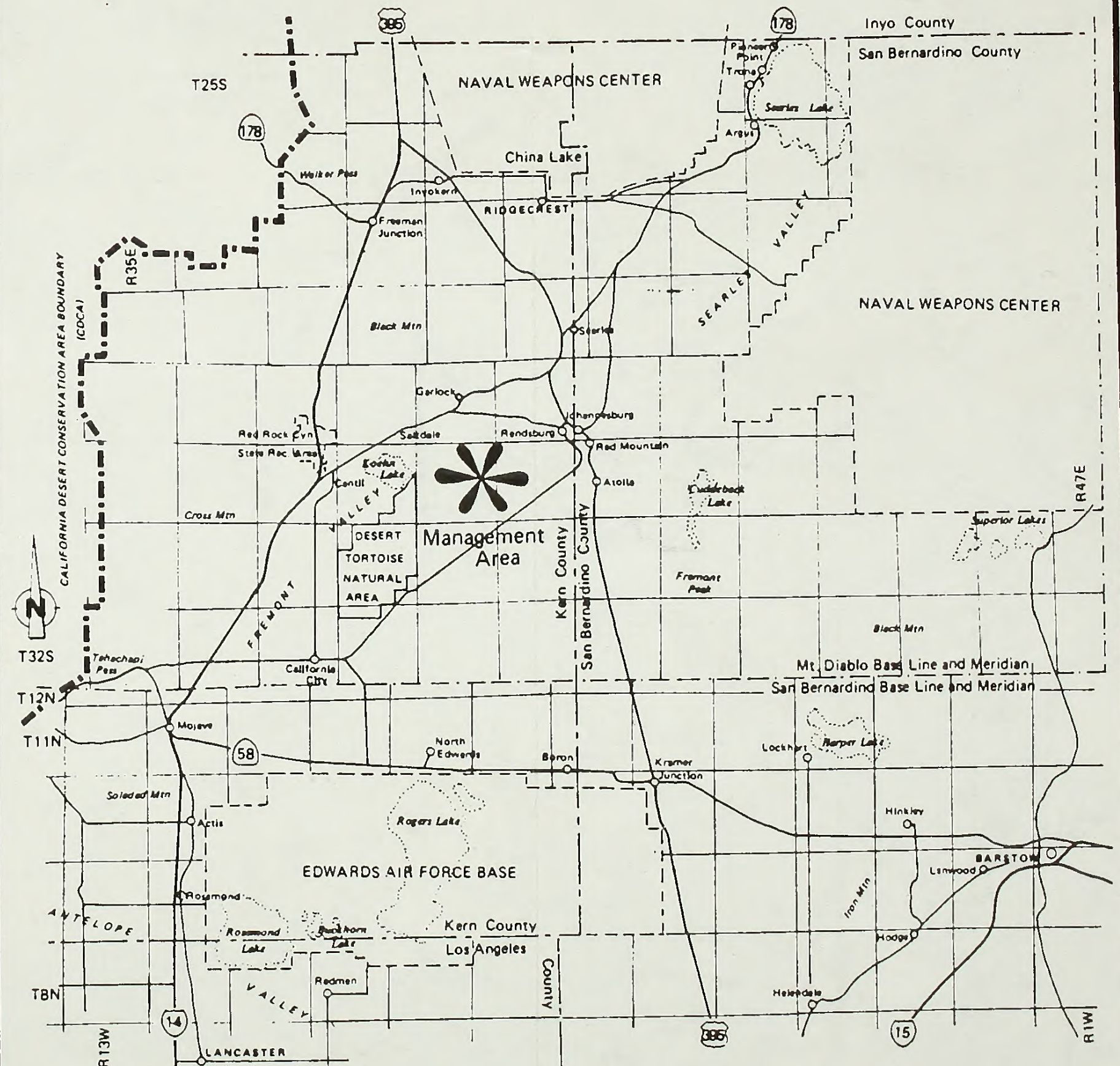
Hazard Reduction	On Going
Restore Disturbed Surfaces	On Going
Ensure no food or trash at camping area	On Going
Reintroduction program	94
Work with user groups	On Going

VII. ILLUSTRATIONS

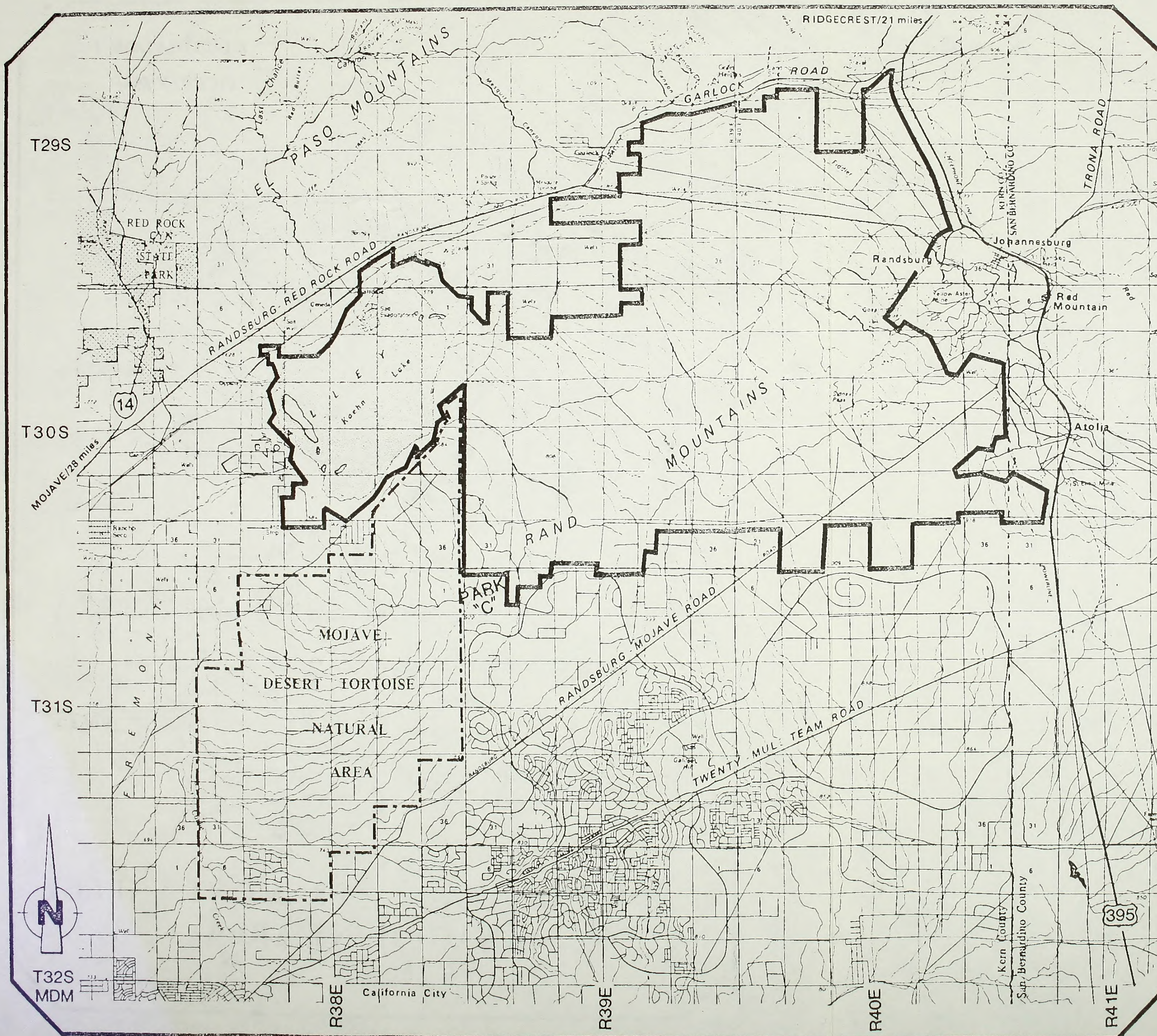
- | | |
|-------------------|---|
| Illust. 1 | Regional Map |
| Illust. 2 | Management Area |
| Illust. 3 | Existing Land Status |
| Illust. 4 | Existing Multiple Use Classes |
| Illust. 5 | Existing Vehicle Routes of Travel
(See back pocket) |
| Illust. 6 | ACEC Expansion Area and Multiple Use Classification |
| Illust. 7 | Minerals |
| Illust. 8 | Designated Vehicle Routes of Travel
(See back pocket) |
| Illust. 9 | Desert Tortoise Habitat |
| Illust. 10 | Recreation |
| Illust. 11 | Land Acquisition |

ILLUSTRATION 1

VICINITY MAP



RAND MOUNTAINS - FREMONT VALLEY MANAGEMENT AREA



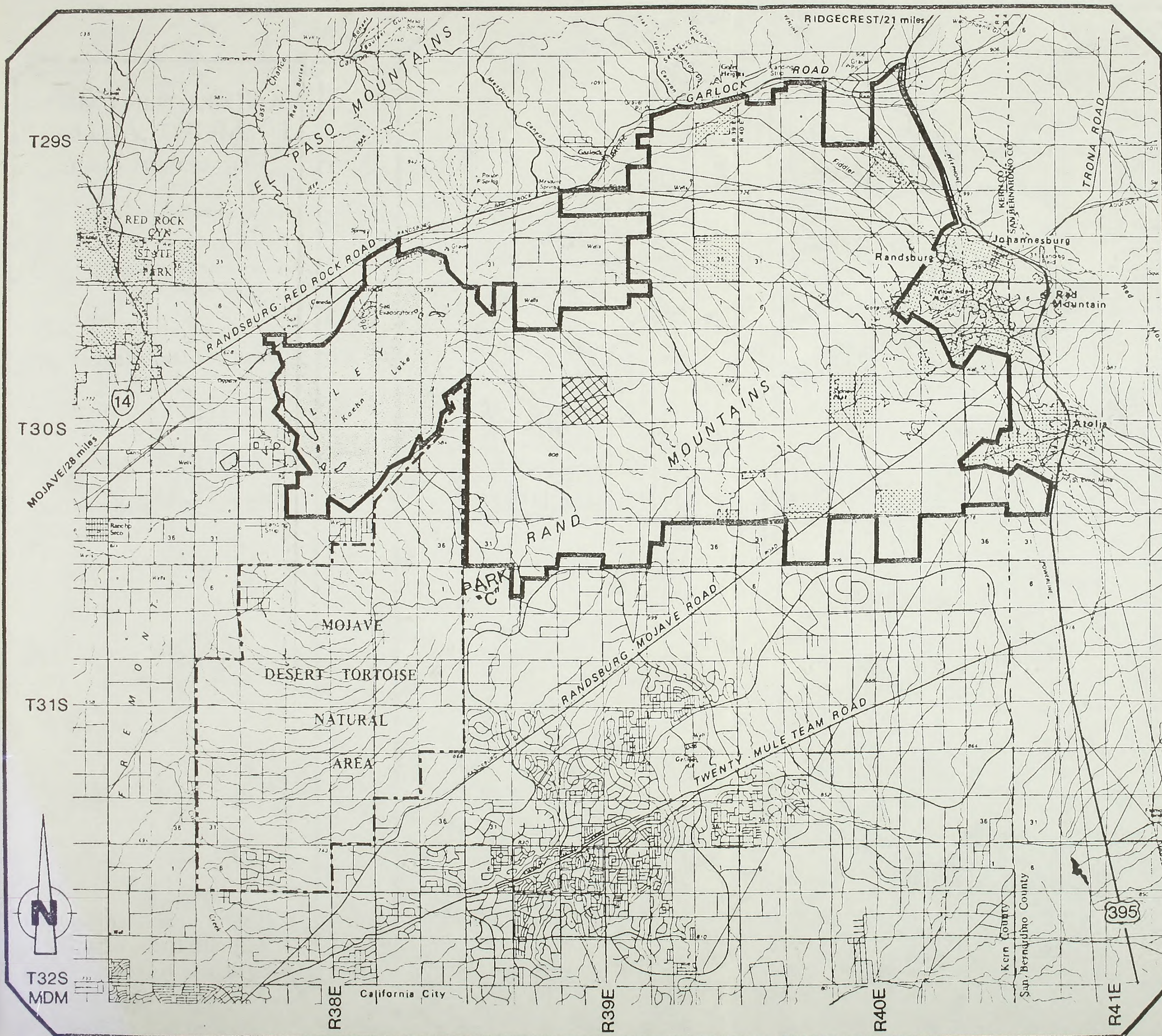
RAND MOUNTAINS- FREMONT VALLEY

MANAGEMENT PLAN

Scale 0 1 2 3 4 miles

Management Area
Boundary

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS-FREMONT VALLEY

MANAGEMENT PLAN

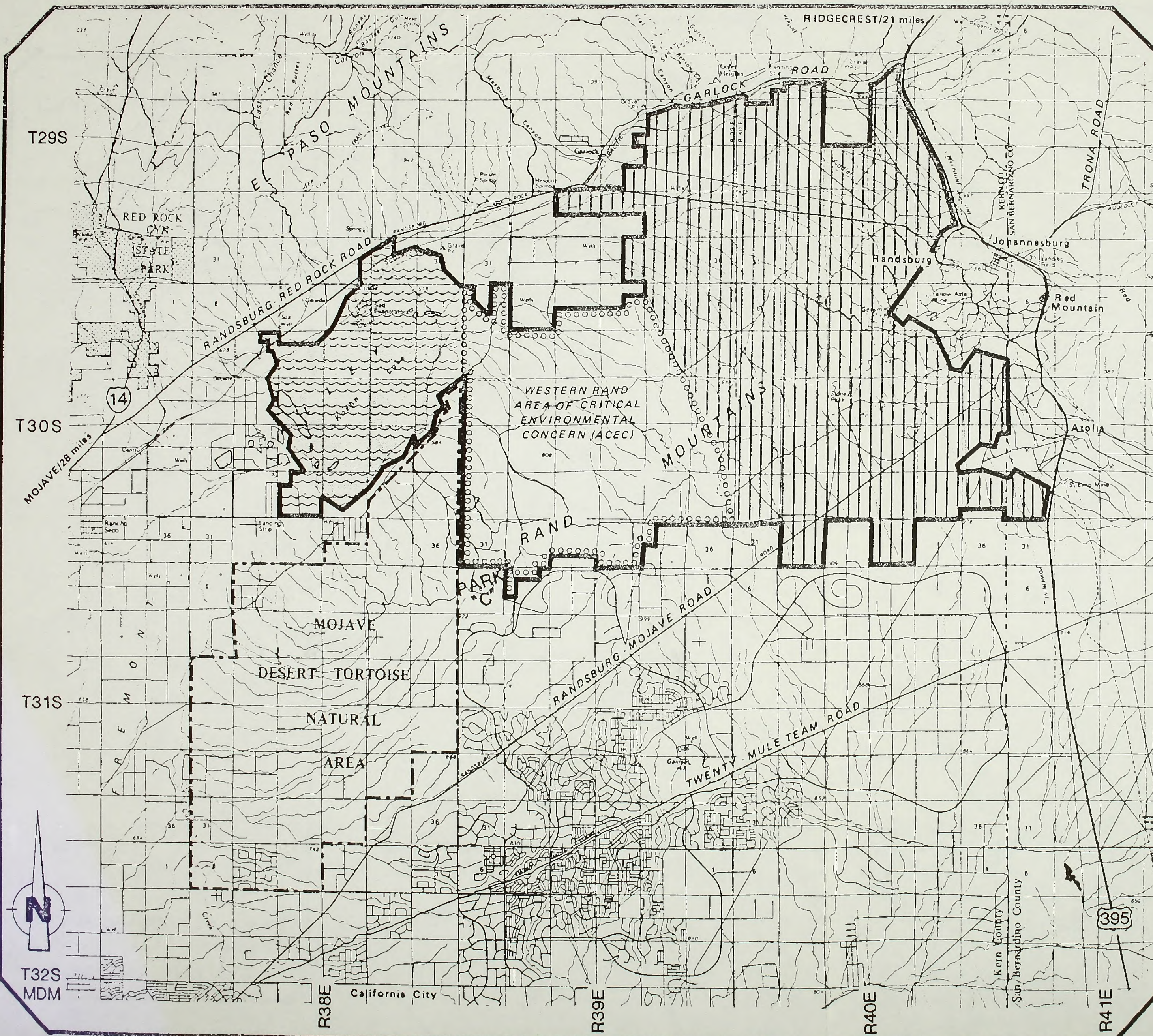
Scale 0 1 2 3 4 miles

Management Area Boundary

Existing Land Status

- Public Domain
- Private Land
- State Land

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS-FREMONT VALLEY

MANAGEMENT PLAN

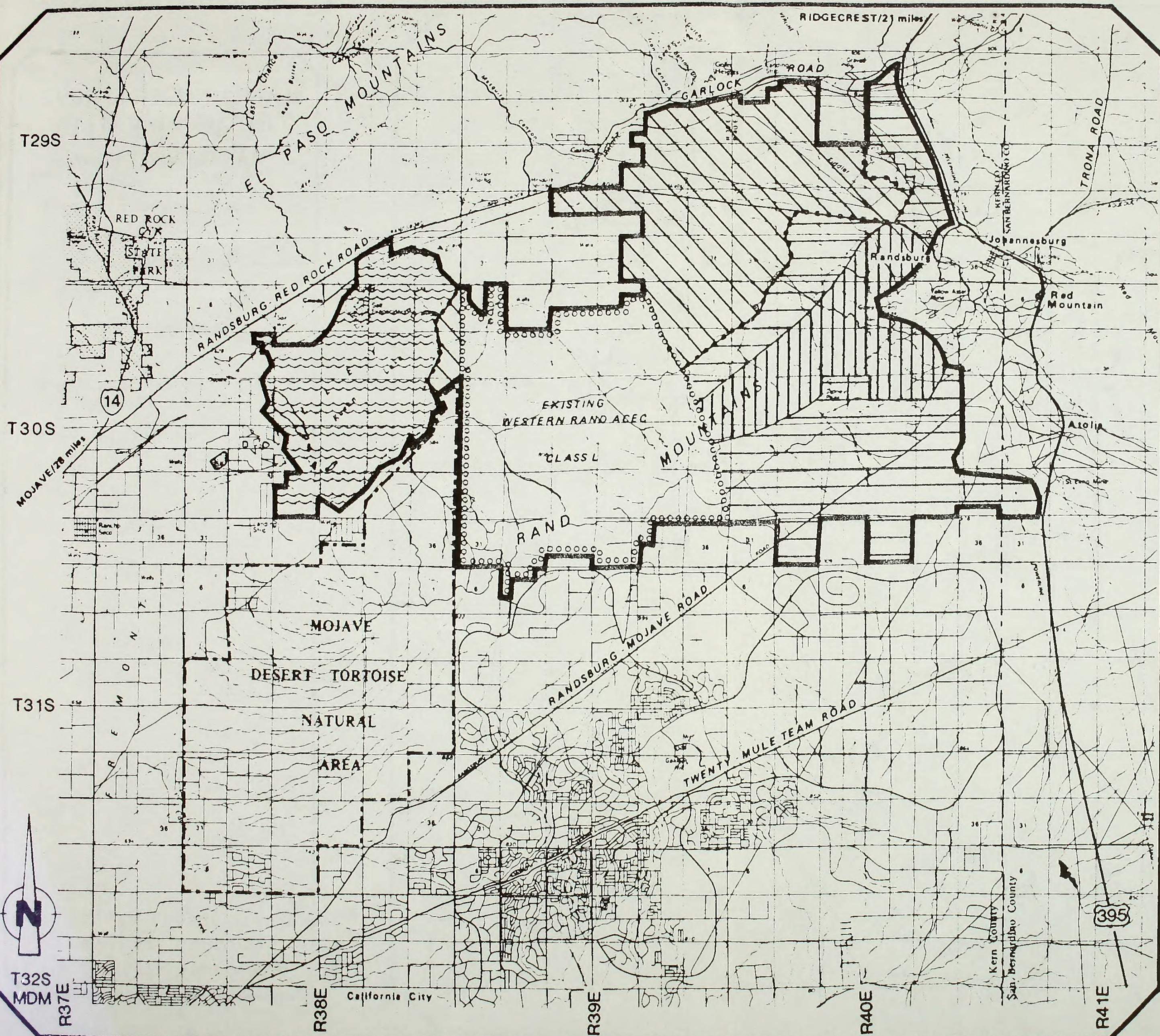
Scale 0 1 2 3 4 miles

Management Area Boundary

Existing Multiple Use Classes

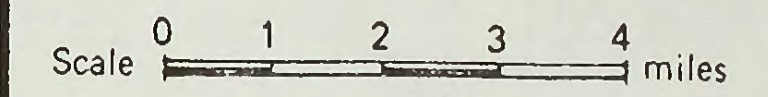
- CLASS L - Limited Use
- CLASS M - Moderate Use
- CLASS I - Intensive Use

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS-FREMONT VALLEY

MANAGEMENT PLAN

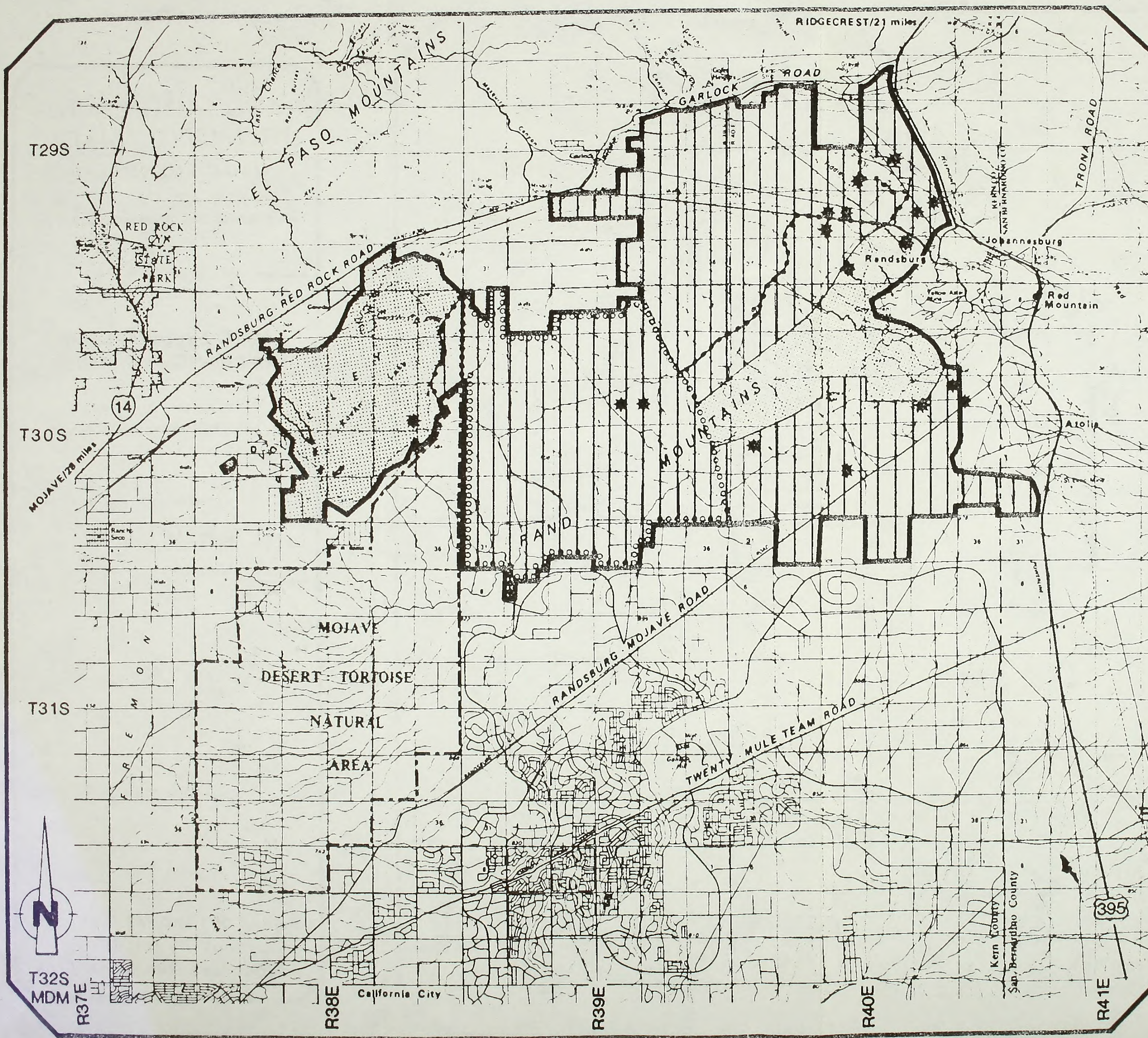


Management Area Boundary

ACEC Expansion and Land Use Classification

- Western Rand ACEC Expansion Boundary - Class L
- Class L outside ACEC expansion area
- Class M
- Class I

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS-FREMONT VALLEY

MANAGEMENT PLAN

Scale 0 1 2 3 4 miles

Management Area Boundary

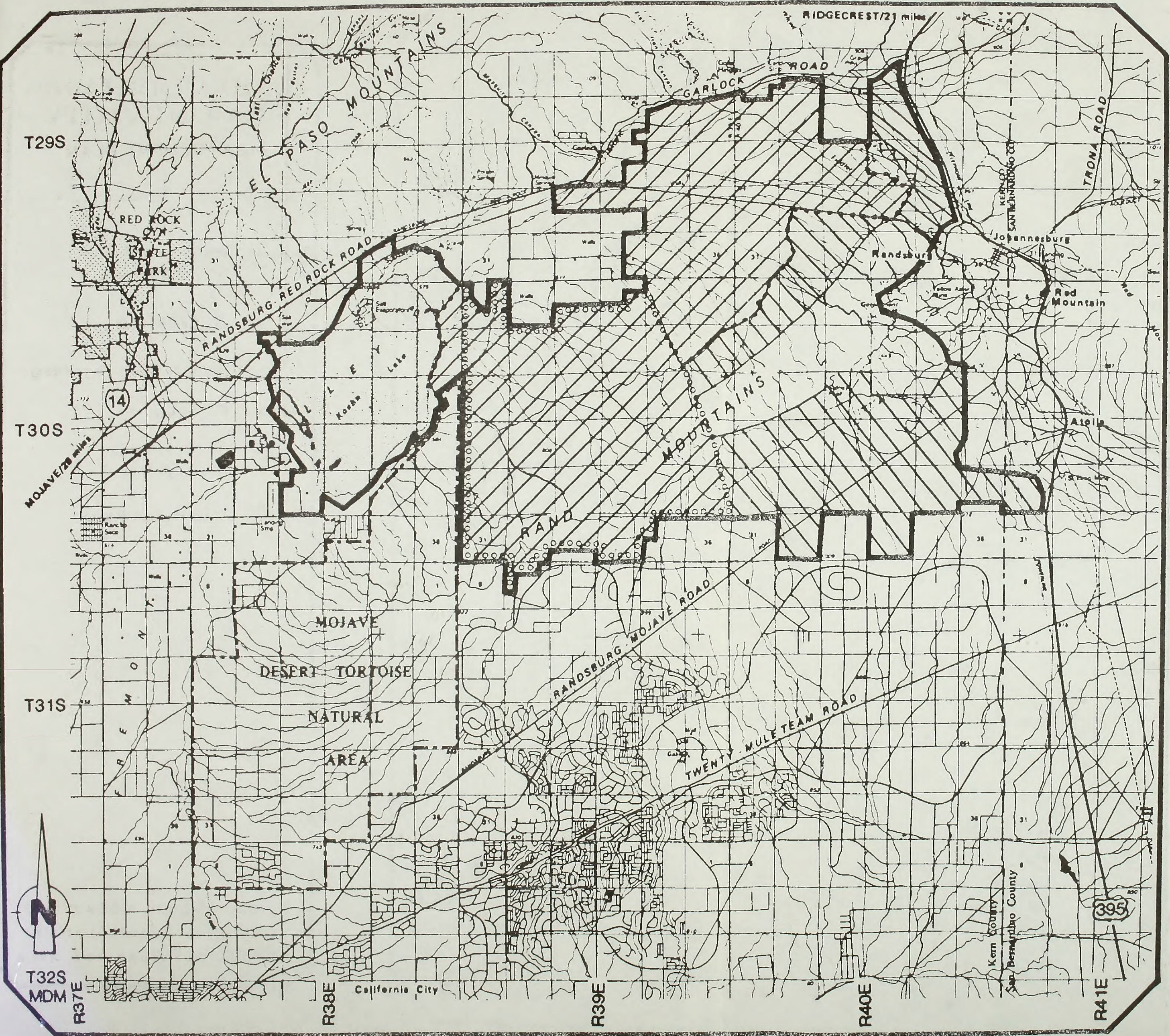
Minerals

Withdrawal from Mineral Entry and Location

Remain Open to Mineral Location

Existing Notice, Plan of Operation or Material Sale

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS-FREMONT VALLEY

MANAGEMENT PLAN

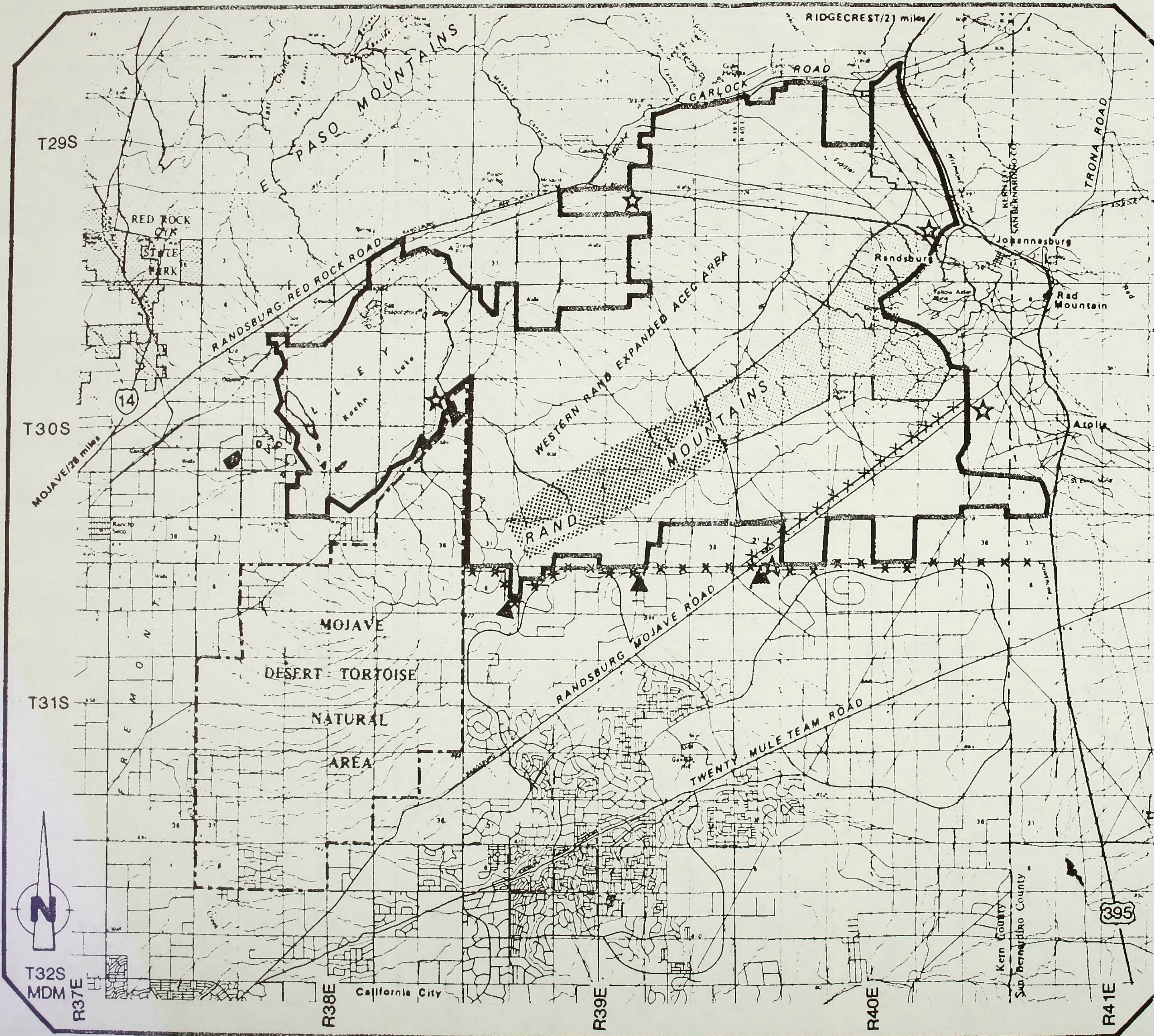
Scale 0 1 2 3 4 miles

Management Area Boundary

Desert Tortoise Habitat

- Western Rand ACEC Boundary
- Category 1 Habitat within expanded ACEC
- Category 1 Habitat outside ACEC

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS- FREMONT VALLEY

MANAGEMENT PLAN

Scale 0 1 2 3 4 miles

Management Area Boundary

Recreation

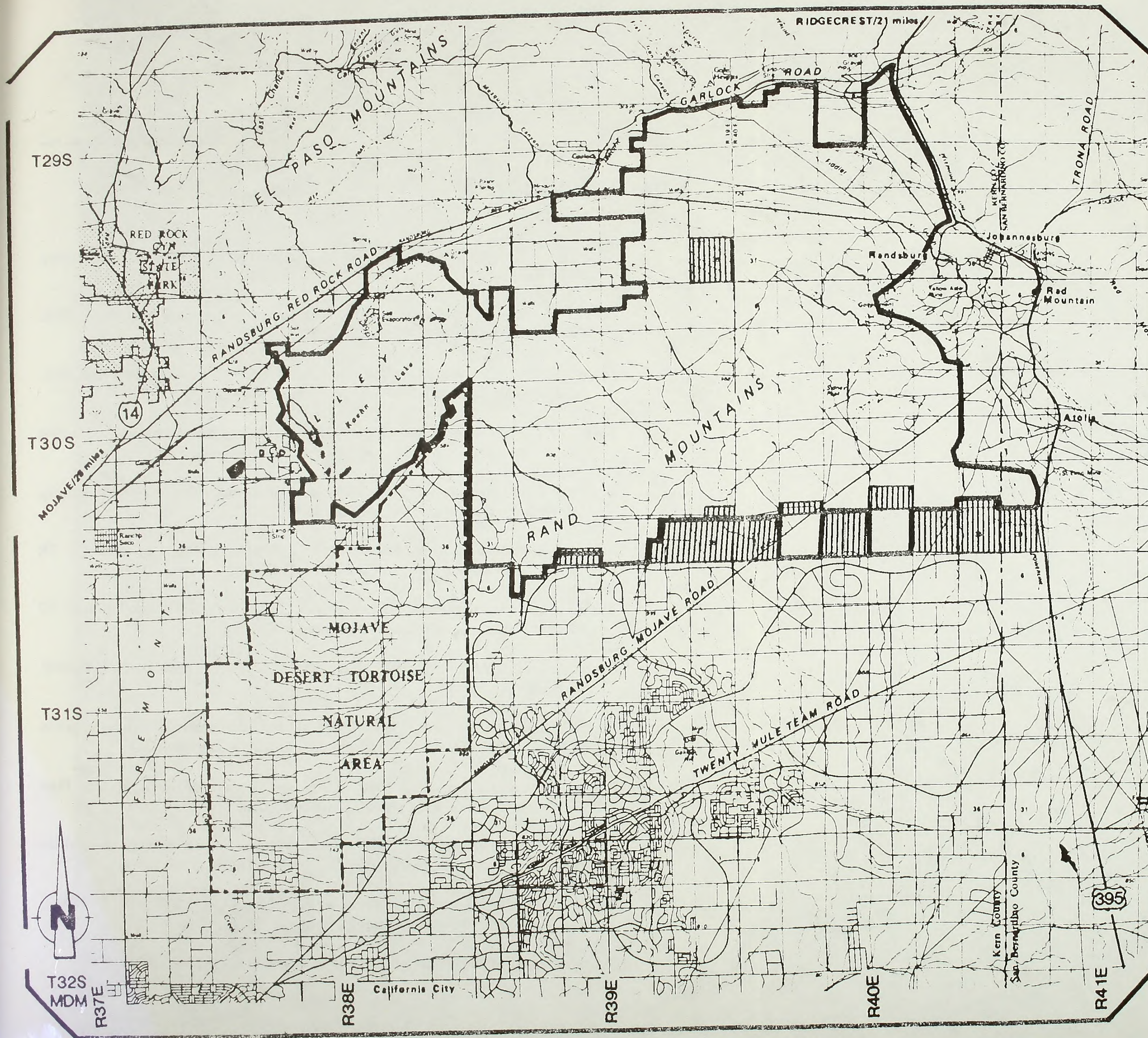
Remain Open to Hunting

Fence Line

Access Points
(through fence)

Information Kiosk

Bureau of Land Management
California Desert District
Ridgecrest Resource Area



RAND MOUNTAINS- FREMONT VALLEY

MANAGEMENT PLAN

Scale 0 1 2 3 4 miles

Management Area
Boundary

Land Acquisition

Private Land Acquisition

Bureau of Land Management
California Desert District
Ridgecrest Resource Area

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APPENDIX A

Environment of the Management Area

1. Wildlife and Wildlife Habitat

Important wildlife resources in the management area in order of their sensitivity are the desert tortoise, Mojave ground squirrel, burrowing owl, desert kit fox, golden eagle, prairie falcon, and chukar. The status of each of these species and their significance in the management area are discussed below.

Desert Tortoise - The desert tortoise is a fully protected species under California Fish and Game Code and is designated as threatened by the California Fish and Game Commission. In addition, the U.S. Fish and Wildlife Service (USFWS) has issued a listing of the desert tortoise as an threatened species, pursuant to the Endangered Species Act.

The management area contains approximately 110 square miles of crucial desert tortoise habitat which is part of the larger Fremont-Stoddard Crucial Habitat. Within the management area, desert tortoise population density estimates as of 1979 were: 66 square miles with densities in excess of 250 per square mile, 38.5 square miles with densities of 100-200 per square mile, and 5.5 square miles with densities of 50-100 per square mile.

Desert tortoise densities on a 640-acre permanent trend study plot in Fremont Valley were studied by the BLM in 1976, 1978, 1979, 1981, and 1987. The study plot is located in one of the least disturbed portions of the valley and has experienced relatively little surface disturbance since the time it was established. There are no major dirt or paved roads or any OHV congregating areas on the plot.

Desert tortoises encountered and recorded on the Fremont Valley plot numbered 203 in 1979, 207 in 1981, and 76 in 1987. The numbers of desert tortoises encountered and recorded on the plot declined 63 percent between 1979 and 1987. Of significance was the 64 percent decline in the population of breeding females between 1979 and 1987. Females are believed to be more susceptible to adverse changes in the habitat due to biological stress they experience during the annual breeding cycle. Embryo and egg development requires naturally high levels of body fat, protein, and moisture. Female tortoises in poor physical condition due to poor quality habitat likely experience abnormally high rates of mortality during the breeding cycle.

Tortoise mortality data on the study plot was obtained by collecting and examining the

remains of 81 tortoises. The annualized mortality rate for sub-adults and adults between 1981 and 1987 was approximately 13 percent, far in excess of the mortality rates of 0.3-1.7 percent per year for stable populations.

Approximately 40 percent of the tortoises which died on the study plot were killed by vandalism, gunshot, and vehicles. Approximately 10 percent were killed by mostly natural causes such as overturning and predators. The majority of deaths were due to unknown causes and totaled approximately 49 percent. It should be noted that raven predation, accounting for 2.5 percent of the mortality, is likely abnormally high and is considered as a human-related factor. Raven numbers in the western Mojave Desert have increased substantially with increased human use and occupancy. This is due to increased food supplies and availability of artificially elevated perching and nesting sites such as utility poles and towers, ornamental trees, fences, signs, buildings, etc.

A three square-mile study plot located in the vicinity of the Interpretive Center at the DTNA includes subplots inside and outside the protective fence surrounding the DTNA. Studies on the plots conducted in 1979 and 1985 reveal that desert tortoise densities inside the fence declined 32 percent, whereas those outside the fence declined 55 percent. The data strongly suggests that significant decline in the tortoise population inside the fence occurred due to high levels of visitor use and that even greater declines occurred outside the protective fence for similar reasons. The tortoise losses adjacent to the DTNA are very likely adversely impacting the population inside the DTNA.

The monitoring of the Interpretive Center study plot at the DTNA revealed a problem with a respiratory disease. It is thought by BLM and CDFG biologists that the disease may have been introduced into the Fremont Valley by released captive tortoises. The disease was detected in the Fremont Valley study plot as well and affects about 50 percent of the population. The result is usually death for tortoises in the wild, and there is no known treatment for the disease in the wild. Tortoises do have a higher survival rate when high quality forage is available.

Because casual land uses occurring immediately adjacent to the DTNA boundary are having an adverse effect on the tortoise population within the DTNA, as has been documented at the Interpretive Center study plot, the management area includes the lands immediately surrounding the DTNA, and it is appropriate that management actions be considered in this Plan to correct this undesirable loss of habitat and desert tortoises. In addition, the area contains a management option for establishing a corridor east of the DTNA which could provide habitat and enable the desert tortoise to make long-term movements from the DTNA to other portions of the Fremont-Stoddard Crucial Habitat. Such movements are needed to ensure population stability through gene transfer.

Mojave ground squirrel - The Mojave ground squirrel is listed as a threatened species by the California Fish and Game Commission. It was first listed as rare in 1971 and upgraded to threatened in 1985. It occurs throughout the management area in suitable habitat and occupies essentially the same habitat as the desert tortoise. This species occurs only in the western Mojave Desert, and substantial habitat losses for this species have occurred on private lands in the Antelope Valley, California City, Victor Valley, Fremont Valley, and Indian Wells Valley.

Approximately 38 square miles of crucial habitat for this species occurs in Fremont Valley. This is one of six crucial habitats for this species on public land in the western Mojave Desert (Bureau of Land Management 1980).

Burrowing owl and desert kit fox - These two species are considered significant by the BLM. The burrowing owl and desert kit fox are fully protected, non-game species and occur naturally throughout the management area. The Burrowing owls occupy abandoned burrows of other wildlife such as the desert tortoise, badger, and desert kit fox. Thus, the owl is dependent upon sustained populations of these other animals to provide specific habitat needs.

Golden eagle and prairie falcon - These two raptors are fully protected under federal and state laws and regulations. The golden eagle is afforded mandatory protection under the amended Bald Eagle Protection Act. These species are known to nest in the mountain ranges surrounding the management area. There are approximately 44 square miles of foraging territory for these raptors in the management area.

Chukar - Chukars were introduced into the Rand and El Paso Mountains by CDFG in the 1940's and early 1950's. Chukars are native to the mountainous regions of the Middle East and were introduced into North America, New Zealand, and the Hawaiian Islands to provide sport hunting opportunities.

Chukars are well established in the Rand Mountains and provide considerable hunting opportunity during the annual open season from the third Saturday in October until the fourth Sunday in January. There are 15 rainwater catchments (guzzlers) in the Rand Mountains that provide water for chukars and other wildlife. Some of the guzzlers are adjacent to regularly traveled dirt roads, whereas, many are located in remote sites accessible only by foot or four-wheel drive vehicles or motorcycles.

LeConte's thrasher - A CDFG sensitive species which occurs in the management area.

2. Geology-Energy-Minerals

a. Geology

Four basic rock types outcrop within the management area. These are, in the order of youngest to oldest: recent alluvial deposits, dissected alluvium and terrace deposits, quartz monzonite (granitic rock), and schist (an altered sedimentary rock).

Quaternary deposits - Recent alluvial fan deposits containing poorly sorted sand and gravel cover the lower slopes of the Rand Mountains and fill the valley floors. The extreme lower parts of the Fremont Valley at Koehn Dry Lake are covered with clay, silt, and fine sand typical of lake beds. The uppermost deposit at Koehn Lake is salt created by flooding and evaporation. Isolated outcrops of an older, erosional surface composed of continental alluvium and terrace gravels occur in the extreme northeast and southeast parts of the management area.

Mesozoic granites - The higher elevations of the western Rand Mountains and an isolated area east of Government Peak and west of Red Mountain are largely composed of quartz monzonite. Quartz monzonite is a rock composed of approximately equal amounts of alkali (potassium rich) and plagioclase (sodium, calcium) feldspars, 5 percent to 20 percent quartz, and up to 20 percent mafic (dark) minerals, typically biotite and muscovite.

Precambrian schist - The eastern Rand Mountains are comprised of a very old, schist (altered sedimentary rock). Dibblee, in Geology of the Saltdale Quadrangle, 1952, describes the rock as a silvery grey mica-albite-quartz schist in which schistose cleavage parallel to bedding is very prominent. The rock is known locally as the Rand schist.

Structure - The predominant structural feature within the management area is the down-dropped block forming the Fremont Valley. The Garlock fault, a left-lateral strike-slip fault, bounds the Fremont Valley on the north and the Rand fault, a normal fault, bounds the valley on the south. The Cantil Valley fault parallels the Garlock and Rand faults and is largely covered in the Fremont Valley. All major structural trends are NE/SW.

b. Energy/Leasable Minerals

No known deposits of oil and gas, geothermal, or other energy-related minerals are known to occur within the management area. However, four wells were drilled for oil and gas in the 1940's within a half mile of Cantil. There is ongoing geophysical exploration for oil and gas to the northwest of the area and a Known Geothermal Resource Area with active geothermal leases adjacent to the eastern border of the

management area.

There are currently no oil and gas or geothermal leases in the management area, but the potential for this type of leasing fluctuates with supply and demand. At present, demand for new energy sources is at an all time low.

Leasable minerals within the management area are primarily sodium and possibly borate minerals located on or near Koehn Dry Lake. There are presently two inactive sodium leases on Koehn Dry Lake.

The Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act (FLPMA) of 1976 give the BLM Authorized Officer discretion in mineral leases on public land. Where overriding environmental values outweigh the benefits of leasing, the Authorized Officer may choose not to lease. However, if a lease is issued, the lessee must, by law, be allowed to develop the lease.

c. Hard Rock/Locatable Minerals

The management area encompasses a portion of the historical Rand and Atolia Mining Districts, known primarily for world class production of gold, silver, and tungsten. The gold output of the Rand district has been valued at about \$20,000,000 (Kern County Report, 1962). Smith and others, 1974, report occurrences of salt, gypsum, gold, tungsten, silver, and manganese within the management area.

The management area has a high potential for future discoveries of hard rock metal deposits in the Rand schist and quartz monzonite rocks. The older alluvium has a moderate to high potential for future deposits of placer gold in locally reworked channels. The younger alluvium has a low to moderate potential for discoveries of gold placers and moderate to high potential for uses as local sources of sand and gravel. As of May 4, 1988, BLM records show one lease, one prospecting permit, and one prospecting permit application for sodium on Koehn Dry Lake. Koehn Dry Lake will continue to be a potential source of sodium and a possible source of borate mineralization.

The mineral interest in the area is very high as reflected in the following summary of mining claim information dated July 20, 1988.

The percentages of claims versus total area are higher than actual claimed land surface due to overlapping claims covering the same ground. The public land base (excluding the DTNA) within the management area was considered as 60,380 acres for the purpose of this exercise.

MINERAL INTEREST SUMMARY

<i>Claim Type</i>	<i>Number</i>	<i>Acres</i>	<i>Percent</i>
Lode	1,212	25,040	40%
Placer	514	34,440	55%
Millsites	13	65	<.1%

*% of total acreage in management area

Since 1981 when the BLM surface management regulations became effective, approximately three plans of operation (surface disturbance greater than five acres), and forty-one notices (surface disturbance less than five acres) have been filed for mining operations on public lands in the management area. Of these, three operations permitted by Plans of Operations, and 16 operations documented by the Notices remain active. In addition, within the management area are three highly active decorative rock and building stone quarries, exploiting the beautiful Rand schist for the southern California building market.

Numerous mining claims west and south of Randsburg and Johannesburg have been patented (converted to private ownership) over the last 100 years. In order to have a claim patented, the claimant must prove the presence of a mineral deposit that can be mined at a profit. Based on past history and the similarity of the geologic environment in the eastern and western Rand Mountains, the potential for more mining claims to be patented is high.

d. Saleable Minerals

Currently, three active building quarries operate within the management area. The primary source rock for these quarries is the Rand Schist. One sand and gravel quarry is located on private land in the northern portion of the management area near the junction of Garlock and Goler Road. The potential for additional sand and gravel quarries on public land is high due to the extensive deposits of alluvial material on the north side of the Rand Mountains. However, under the Mineral Materials Act of 1947, as amended in 1955, the BLM's Authorized Officer has the discretion to approve or deny mineral material sale applications.

3. Grazing

Grazing use in the management area dates back approximately 120 years. The maximum use of the area occurred around 1870 when nearly one million sheep passed through the western Mojave desert area. Sheep numbers in California, and the resultant grazing use, have steadily declined since that time. By the early 1950's, the sheep numbers in the vicinity of the management area had declined to approximately 200,000 head of sheep and have further declined to around 20,000 to 30,000 head for the general area during the last several years. Cattle have also grazed the area. Historic accounts indicate that several large cattle operations had been based in the Fremont Valley near Koehn Lake prior to 1930 (CDCA Final EIS and Proposed Plan Appendix Volume V).

The management area is totally within the Cantil Common Sheep Allotment. The Cantil Common Allotment contains approximately 290,000 acres of BLM land and the management area contains 60,380 acres which constitutes 22 percent of the allotment area. Sheep graze predominately on the annual (ephemeral) vegetation during the spring growing season. Sheep are herded in bands of approximately 800 head plus lambs with a herder and a camp trailer associated with each band. Water is hauled to the sheep when they are on the range. Since 1980, sheep have grazed in the management area in 1981, 1982, 1983, 1985, 1986, and 1988 with no grazing in 1984 and 1989 because of low forage production. Due to cold weather which delayed tortoise emergence until early April and late March in 1982 and 1988 respectively, sheep use in the management area was limited in those years. Most of the grazing use in the management area is along the south side of the Rand Mountains (approximately three to five bands each year). Most of the remainder of the grazing occurs along the northeast side of the Rand Mountains and along the east side of the management area (two to three bands each year).

4. Vegetation

The area supports an unusual diversity of vascular plants. Previous work done by Berry (1978a) and Henry (1982) has identified 154 species of annual and perennial plants within the boundaries of the Desert Tortoise Natural Area. The expanded boundaries of the Rand Mountains/Fremont Valley Planning Unit is expected to include additional species. Berry has described four vegetation communities within the vicinity of the DTNA (Berry 1978). These are:

a. Creosote Bush Scrub

This community occupies the well-drained bajadas from 2,000-3,000 feet in elevation. The dominant species is creosote bush (Larrea tridentata) with an understory of low

perennial shrubs. Most common are: burrobrush (Ambrosia dumosa), goldenhead (Acamptopappus sphaerocephalus), cheesebush (Hymenoclea salsola), winterfat (Ceratoides lanata), spiny hopsage (Grayia spinosa), Anderson thornbush (Lycium andersonii), and peach thorn (Lycium cooperi). Two perennial grasses are common - Indian rice grass (Oryzopsis hymenoides) and desert needlegrass (Stipa speciosa).

b. Creosote Bush-Rocky Slopes

The bajadas grade up into the Rand Mountains in the south of the planning unit up to an elevation of 3,100 feet. The rocky slopes support a community that is affiliated with Creosote Bush Scrub, with the addition of the following low perennial shrubs: California buckwheat (Eriogonum fasciculatum), Nevada joint-fir (Ephedra nevadensis), and terete-leaved rubber brush (Chrysothamnus teretifolius). In canyon washes, additional species that are present are paperbag bush (Salazaria mexicana), Mojave horsebrush (Tetradymia stenolepis), and cheesebush.

c. Joshua Tree Woodland

This community occupies the upper portions of the Rand Mountains. Species composition includes those found in Creosote Bush Scrub community, with the addition of Joshua Tree (Yucca brevifolia) as the overstory dominant. The understory is comprised of a diversity of perennial shrubs and includes local abundances of perennial bunchgrasses.

d. Alkali Sink Scrub

The Creosote Bush Scrub of the lower bajadas gives way to the Alkali Sink Scrub community that encircles Koehn Dry Lake (elevation 1,900 feet). This unusually diverse stand of Alkali Sink Scrub is comprised of the following perennial shrubs: allscale (Atriplex polycarpa), shadscale (A. confertifolia), wingscale (A. canescens), Torrey saltbush (A. torreyi), scalebroom (Lepidospartum squamatum), Thurber sandpaper plant (Petalonyx thurberi), and cheesebush.

e. Psammophytic Community

On the north face of the Rand Mountains are a small set of sand dunes. The vegetation inhabiting the dunes has not been investigated.

Grazing and OHV activity in the planning area has had several impacts on the vegetation. Total percent cover has been reduced, especially on sites that were used as staging areas for OHV events. A number of invasive herbaceous species, primarily of Mediterranean

origins, have been introduced into the area. Among these are: Ragweed (Ambrosia acanthicarpa), Russian thistle (Salsola iberica), Doveweed (Eremocarpus setigerus), and the wild mustards (Brassica spp.). Several introduced grasses such as the bromes (Bromus spp.) and especially split grass (Schismus arabicus) carpet the desert floor each spring and displace the native annual species that are favored forage by the desert tortoise.

f. Species of Special Concern

There are three species of special concern that have a potential of occurring within the planning unit. The Mojave woolly sunflower (Eriophyllum mojavnense) is a candidate for listing by the USFWS and is considered by CNPS to be rare and endangered in California and elsewhere. The Mojave chorizanthe (Chorizanthe spinosa) and the Mojave fishhook cactus (Sclerocactus polyancistrus) are both on the California Native Plant Society (CNPS) List 4 -a watch list of plants of limited distribution. To date, no surveys to identify the presence of these three species have been performed within the planning unit.

4. Access

The management area has been used constantly for the past 30 years by OHV enthusiasts for both competitive events and general recreational access. This has resulted in an extensive trail network throughout the area with a particularly heavy concentration of routes in the West Rand Mountains ACEC. Before the completion of the CDCA Plan, this management area was designated as "open" (vehicle travel permitted on all routes and cross-country). Since 1980 the area has been limited to existing routes of travel for vehicle use with some trail closures to protect sensitive wildlife values. The general unobstructed character of the area with numerous sand washes, lack of screening vegetation, absence of steep topography (except in the eastern Rand Mountains), and numerous access points have made effective implementation of the limited route designations very difficult.

5. Recreation

a. Off-Highway Vehicle (OHV) Use

A variety of OHVs (four-wheel drive trucks, motorcycles, ATVs, etc.) are used by recreationists in this management area. The numerous vehicle roads and trails have made this a popular area on weekends and holiday periods throughout the past three decades. OHV users typically camp on either public land within the management area or on private land within the boundaries of California City and then ride throughout the area.

OHV use occurs throughout the management area, but is heaviest along the western Rand ACEC boundary with California City (north of Park C) and along the crest of the central Rand Mountains. The heaviest OHV casual use is generally observed within one mile of visitor campsites. OHV use also includes approximately 10 to 20 organized motorcycle club rides each year over flagged courses.

b. Competitive OHV Events

A variety of OHV competitive events (enduros, European scrambles, hare and hound events, etc.) have been permitted in the management area since the BLM initiated the Special Recreation Use Permit (SRUP) program in 1972 (43 CFR 8372.1-1). These permits were issued with the intent of mitigating and regulating the OHV races that had occurred in the Rand Mountains since the 1950's.

A total of 220 major permitted events have been run in the management area since 1972 (see Table A-I). The highest number of permits issued in a single year was during 1976 when 34 race permits were issued with a total of 8,912 participants. After the CDCA Plan was approved in 1980, the number of permits dropped to an average of six permits per year until 1988. Since 1989, no competitive OHV events have been authorized in the Plan area.

c. Other Recreational Activities

The installation of numerous wildlife water catchment "guzzlers" throughout the Rand Mountains starting in the 1940's has made upland game hunting popular in the management area each fall. For hunting, chukar is the most important upland game animal. Upland game hunting has reduced somewhat over the past 20 years due to increased competition from OHV activity. Hunting for rabbits and other small game is also common.

Target shooting is popular throughout the management area. Camping is popular during the cooler months and is usually associated with OHV activity. The eastern Rand Mountains is popular with rockhounds for rare rock collection.

6. Lands/Realty

The area within the total boundaries of the management area encompasses widely varied topography and land use. Although the higher elevations of the Rand Mountains are not encumbered by many land use authorizations, most of the rest of the area has experienced moderate to heavy disposal and land use activity.

TABLE A-I

**SPECIAL RECREATION USE PERMITS (COMPETITIVE EVENTS)
IN THE RAND MOUNTAINS/FREMONT VALLEY SINCE 1972**

<u>Year</u>	<i>Number of <u>Events</u></i>	<i><u>Participants</u></i>
1989	1#	260
1988	1#	151
1987	7	2,737
1986	3	994
1985	8	1,945
1984	6	2,189
1983	5	1,438
1982	12	3,235
1981	11	3,105
1980	10	5,117
1979	12	2,963
1978	18	4,899
1977	20	5,418
1976	34	8,912
1975	25	10,845
1974	19	8,728
1973	23	9,600
1972*	5	3,414
TOTALS	220	75,940

#Enduro events where camping, start/pit/finish areas and one or more course loops were outside of the Rand Mountains/Fremont Valley Management Area.

*Partial year reporting.

Several major paved and high-use gravel roads are within the area; U. S. 395 forms much of the eastern boundary. The Randsburg-Red Rock Road is both within and bounded by the northern portion, while the Randsburg-Mojave Road crosses the southeast part of the area.

The Randsburg-Johannesburg-Red Mountain areas, established communities with active mineral operations and supporting infrastructure, border the management area on the east. Government Peak, a major communication site, lies at the eastern edge of the area. The management area is also impacted by its close proximity to California City, which is a steadily growing community.

Although the core of the management area is not heavily impacted by transportation and utility systems, the peripheral portions are. The east and south sides of the area are affected by existing high voltage electrical transmission lines, a gas pipeline, and U.S. 395 is considered a designated contingency corridor in the CDCA Plan. This means that should use increase, the CDCA Plan may be amended to designate a utility corridor along U.S. 395 to accommodate probable needs.

With growth of the southern California urban areas, the need for energy will increase. Much of this energy will need to be transmitted through this area from sources as near as the Coso geothermal development and the ACE co-generation facility in Trona, and as far as major power plants in Nevada, Montana, Wyoming, and other states in the inter-mountain region. Both the U.S. 395 and SR-14 corridors will be vital to accommodate these future needs.

While the existing West Rand Mountains ACEC is lightly impacted by disposal and right-of-way activities, the Class M and Class I areas under this study are heavily impacted. These latter two areas are important to communication, transportation, and utility needs of the surrounding region. In all alternatives, the Koehn Lake area retains a Class I designation.

Large portions of the Fremont Valley were transferred to private ownership under various agricultural entry laws. One of the significant statutes, the Desert Land Entry Act, encouraged reclamation of desert lands for agriculture by using surface or groundwater. The Act allows patents to be issued at token cost when a portion of the entered parcel is irrigated. At this time, both the CDCA Plan and earlier BLM administrative decisions and land classifications limit disposals under this Act, although the statute is still in force. Several factors, including groundwater conservation concerns, obvious failure of many existing agricultural operations in the area, and overall environmental incompatibility will prevent the BLM from administratively opening the management area to entries.

7. Other Resources

a. Vegetation Harvesting

Under the CDCA Plan (1980), commercial plant harvesting may be allowed by permit only (in multiple-use classes I, M, and L) after environmental assessment requirements are met and necessary stipulations are developed. There have been no vegetative sales to date in the area under consideration, but there is a potential for creosote stem harvesting with a depletion of the resource in other areas.

b. Archaeological Resources

There has been no on-the-ground inventory of cultural resources in the management area and no significant cultural resources have been identified within the area. Planning documents prepared for the CDCA Plan predict that prehistoric temporary and permanent campsites occur within the valley floor and Rand Mountains. Sites associated with historic mining (late-19th century to 1930's) probably occur within the area.

There has been at least one cultural clearance at Koehn Dry Lake along the northern shoreline. Completed in 1977 by Garth Portillo for the BLM. There are some historic resources within the planning area but they are poorly documented or not at all. Dr. M.Q. Sutton has conducted research on prehistoric sites near Koehn Dry Lake on private land just outside the planning area. There may be prehistoric resources in favorable locations in the planning area.

APPENDIX B

Management Plan Issues

The following issues were developed by the Rand TRT and formed the basis, along with public input from initial public open house meetings form the issue statements set forth in this Plan:

1. Should existing West Rand ACEC and/or DTNA boundaries be modified to provide for greater Desert tortoise habitat protection?
2. What are necessary measures to protect the Desert tortoise population and habitat?
3. How should vehicle use be regulated? Are any vehicle closures needed? Should better define existing route network and establish a well-planned system which is easy to follow.
4. How should grazing be regulated? Restrict bedding? Grazing use must be in compliance with BLM policies for Desert tortoise habitat.
5. Are mining restrictions needed? Consider not allowing any residences on mining claims.
6. What visitor use restrictions are needed?
 - Shooting and/or hunting closure?
 - Camping restrictions?
 - Use closures?
 - Rockhounding restrictions?
7. Is land acquisition needed for meeting desert tortoise habitat protection goals?
8. What are appropriate OHV event types and levels? Consider start areas, event routes, and seasonal scheduling of events.
9. How should wildlife guzzlers be protected?
10. Are there other protected plant and animal species besides the Desert tortoise and Mojave ground squirrel which need to be considered?
11. Is this a raptor foraging area?

12. Designated routes should be revised. What are the best ways of implementing and enforcing route designations?
13. What level of ranger patrol coverage is needed?
14. Can State OHV grant funds be used for this area?
15. Is fire management planning needed and what is the role of wildfire in this area?
16. What are ways to stop the collecting of desert tortoises?
17. Consider expanding use of study of plots and use of route reclamation study.
18. Has heavy recreational use to the south lowered desert tortoise population numbers?
19. How does California City zoning along south side affect the management area?

APPENDIX C

List of Preparers and TRT Members

The following is a listing of BLM personnel and TRT members who assisted in the preparation of this Plan:

A. BLM STAFF PARTICIPATION

Jeff Aardahl	Wildlife Biologist
Craig Beck	Park Ranger
Priscilla Bonin	Clerk/Typist
Fred Coe	Visitor Information Specialist
Lee Delaney	Area Manager
Don Dollar	Rand Sector Ranger
Tamara Greaves	Administrative Branch Chief
Paul Happel	Lead Outdoor Recreation Planner
Glenn Harris	Range Conservationist
Jim Keeler	OHV Program Manager
Jan Liebhauser	Clerical Assistant
Joe Liebhauser	Realty Specialist
Patricia McLean	Area Manager
Peter Milne	Geologist
Joan Oxendine	Archaeologist
Bob Parker	Wildlife Biologist
Steve Smith	Rand Plan Team Leader
Mark Struble	Lead Outdoor Recreation Planner
Greg Thomsen	Resource Branch Chief
Dave Wash	Outdoor Recreation Planner
Eric Watkins	Natural Resource Specialist

B. TECHNICAL REVIEW TEAM

Technical review team members who attended TRT meetings and developed a report for this management area. Their report and oversight provided valuable information which was used in the development of this management Plan.

Chuck Bell
Marion Ely
Rick Hammel
Frank Hoover
Steve Kuehl
Peggy Rosler
George Monscko
Don Moore
Frank Munoz
Jim St. Amant

Desert District Advisory Council
Mining Industry Representative
District 37, American Motorcyclist Association
California Department of Fish and Game
California Off Road Vehicle Assoc.(CORVA)
Acting California City Manager
Desert Tortoise Preserve Committee
Audubon Society, Kern-Crest Chapter
Kern County Wool Growers
California Department of Fish and Game

APPENDIX D

Rangewide Plan Objectives

The "Rangewide Plan" (Desert Tortoise Habitat Management on the Public Lands: A Rangewide Plan (November 1988)) identified the following 14 management objectives for managing the desert tortoise on public land.

1. Develop increased awareness of tortoise resources on the public lands.
2. Complete and maintain on a continuing basis an inventory and monitoring program for tortoise populations and habitats to assist in making management decisions on the public lands.
3. Develop and maintain a monitoring program specifically for land-use activities that adversely affect tortoise habitats. This program will be used in the analysis of and response to the cumulative impacts of land-use decisions on tortoise habitats.
4. Comply fully with the Endangered Species Act of 1973, as amended, as it relates to tortoise population and habitat management on the public lands.
5. Develop and maintain effective coordination and cooperation with outside agencies and BLM constituents concerning tortoise populations and habitat management.
6. Conduct research and studies sufficient to develop and document the knowledge and techniques needed to ensure the viability of tortoise populations and habitats in perpetuity.
7. Manage the public lands, on a continuing basis, to protect the scientific, ecological, and environmental quality of tortoise habitats consistent with the Category Goals and other Objectives of this Rangewide Plan. This implies management for the existence of an adequate number of healthy and vigorous tortoise populations of sufficient size and resilience to withstand the most severe environmental impacts, and with appropriate sex and age ratios and recruitment rates to maintain viable populations in perpetuity.
8. When the need is identified through the BLM planning system, acquire and/or consolidate, under BLM administration, management units with high tortoise habitat values, and mitigate the effects of issuing rights-of-way across public lands.

9. Ensure that off-highway vehicle use in desert tortoise habitats is consistent with the Category Goals, Objectives, and Management Actions of this Rangewide Plan.
10. Ensure that livestock use is consistent with the Category Goals, Objectives and Management Actions of this Rangewide Plan. This may include limiting, precluding or deferring livestock use as documented in site-specific plans.
11. Provide for herd management for wild horses and burros which is consistent with the Category Goals, Objectives, and Management Actions of this Rangewide Plan. This may include limiting or precluding wild horse and/or burro use, as appropriate.
12. Provide for management of wildlife other than desert tortoises on the public lands consistent with the Category Goals, Objectives and Management Actions of this Rangewide Plan.
13. Cooperate with state wildlife agencies and APHIS to effect appropriate types and levels of predator control to meet the Category Goals and Objectives of this Rangewide Plan. This will be considered only where predation is interfering with maintaining viable tortoise populations.
14. Manage the BLM's energy and minerals program in a manner consistent with the Category Goals and Objective of this Rangewide Plan.

APPENDIX E

ANALYSIS OF THE COMMENTS RECEIVED FOR THE DRAFT RAND MOUNTAINS/FREMONT VALLEY MANAGEMENT PLAN

A. Comments

Written comments to the draft Plan generally fell into three groups:

1. Plan is too restrictive (37 responses)
2. Plan is not restrictive enough (17 responses)
3. Comments on specific points (10 responses)

Respondents in groups 1 and 2 also had comments on specific points but the overall tone of their comments were relative to the restrictiveness of the draft Plan.

The respondents in group 1 strongly objected to the proposed reductions in routes available for vehicle use and available for sheep grazing, and area available for mineral entry. The feelings were that these uses did not impact the desert tortoise or its habitat. They felt the Plan is further proof of the BLM's desire to remove these uses from the public lands. References were made to the proposed elimination of three large OHV races elsewhere in the California desert, current levels of grazing relative to historic levels, failure to cope with raven predation and the Upper Respiratory Disease Syndrome (URDS), etc. The comments also stressed that the BLM database is flawed, incomplete and prejudiced against their uses of the public lands. In summary, respondents felt the proposed restrictions are unwarranted and would provide minimal benefit for the desert tortoise.

Group 2 comments strongly felt the draft Plan allowed too much OHV use to continue. They pointed to the BLM's data and felt the evidence strongly supported complete removal of OHV use and grazing. The overall feeling was the cumulative impacts of these uses plus vandalism was unacceptable and should be eliminated. They felt BLM had ignored available data and the Plan would not meet several goals and management actions of BLM's policy as stated in the Desert Tortoise Habitat Management On the Public Lands, A Rangeland Plan (November 1988). This group also strongly supported expansion of the DTNA.

Group 3 comments were generally received from utility companies and BLM staff. The utility companies wanted existing designated corridors and rights of ways recognized in the

Plan and maintenance roads to be part of the OHV route network. BLM staff comments addressed specific points such as a route network without deadends, recognizing several existing rights of ways, evaluating an expansion of the DTNA, cultural resource data, etc. Comments from some BLM staff paralleled those of Group 2.

Oral comments were received at public meetings in Ridgecrest and Riverside. Comments closely paralleled those of Groups 1 and 2. Additional comments were received from citizens of Randsburg, Johannesburg, and Red Mountain regarding the economic impact to the communities from reduced OHV use in the area. Some also suggested the actions warranted analysis in an environmental impact statement.

B. Response

Typically, public response to BLM actions reflect tightly held philosophies regarding use of the public lands. Response to the draft Rand Mountains/Fremont Valley Management Plan was not an exception. Comments either reflected a strong empathy for the desert tortoise and other natural resources or for traditional human use of the public lands. Naturally, proposed actions varied from complete removal of human activities to no restrictions of human activity.

It is BLM's feeling and that of the TRT that all uses have cumulatively impacted the desert tortoise over the years. However, no single use can be identified as the one factor to be reduced or eliminated. Coupled with the severe drought over the past several years, desert tortoise death losses have accelerated. Additionally, natural death loss from the respiratory disease has accelerated to epidemic proportions and raven predation has decimated the juvenile populations. Although a definite connection is not apparent, human activity plus the drought may very well be contributing to the stresses that make the desert tortoise more susceptible to the respiratory disease.

The Rand Mountains/Fremont Valley Management Plan is a strong reflection of BLM's commitment to positive management of the desert tortoise and its habitat. Elimination of the random shooting, a 83% overall reduction in the miles of roads and trails, and restrictions on livestock grazing. On the other hand, allowance of traditional human uses of the area under tight restrictions is an indication of the BLM's commitment to accommodate these uses if at all possible. Continuance of the uses or complete removal will be totally dependent upon the public to act responsibly within the management actions. Modifications of the management actions will be based upon monitoring data collected for the area.

APPENDIX F

Resource Monitoring

1. At a minimum, one ephemeral clipping study will be conducted on the north side and one on the south side of the Rand Mountains as part of the normal clipping studies at the start of the grazing season. The clipping studies will follow standard procedures.
2. Once the grazing season is open, clipping studies will be conducted every other week throughout the grazing season.
3. Six permanent photo points will be established within the management area and will be photographed yearly during the first week of April. These photographs will be oblique photos showing ephemeral vegetation within a one meter plot frame. The photographs will document the year-to-year variation in forage production. A clipping study will be conducted adjacent to the photo plot to quantify the forage production.
4. Tortoise 60-Day Study Plot

The Fremont Valley Study Plot was established in 1979 and was monitored in 1981 and 1987. This plot is approximately one square mile in area and is situated at the northern end of Fremont Valley. The types of information obtained from this plot are:

- Population density estimates
- Trend
- Sex ratios
- Age structure of population
- Size structure of population
- Mortality
- Health of tortoises
- Distribution

This plot is one of 27 originally surveyed during preparation of the CDCA Plan. Fifteen of these were selected for monitoring on a regular basis. This plot is scheduled to be monitored again in 1991.

5. Tortoise Emergence Study

Transects are run annually as part of the Resource Area's tortoise emergence study program.

This activity is conducted to determine the impacts of grazing of domestic sheep on public lands. Turnout requirements for domestic sheep (CDCA Plan) state that a certain amount of forage exists and that the majority of desert tortoises have emerged and are actively eating and engaging in normal activities.

6. Raven Monitoring

In 1989, a pilot project was begun at selected sites to control the common raven. The Desert Tortoise Natural Area was selected as one site. Intensive monitoring was conducted at a number of locations around this area before, during, and after the poisoning of ravens at this site. If the program is determined to be effective in controlling ravens and reducing tortoise mortality from raven predation, the program may be expanded to include the management area. In that case, monitoring will be carried out on ravens here as well.

7. Multiple-Use Studies

On adoption of this Plan, monitoring studies will be established to determine the effects of various activities on the desert tortoise and the vegetation making up its habitat. These will be established around the Fremont Valley and other areas where comparable plots can be studied; e.g., grazed versus ungrazed and motorcycle use versus no motorcycle use. The TRT will assist the BLM in determining what other activities should be studied. Budgetary restraints and the ability to acquire funding will be factors in what studies will be established. These studies should include the measuring of levels of use; e.g., numbers of motorcycles using certain areas, numbers of sheep, etc. Weather information should be acquired in addition.

8. Disease

One recommendation from the disease specialists is that a monitoring study should be established to determine the spread or extent of the disease within the management area. This long-term study should determine mortality and the impacts of other activities such as drought, motorcycles, grazing, paved roads, etc., on the lethality of the disease. We hope to get information on the numbers of tortoises that actually survive the disease in the wild. This information will be critical in the future, since this problem will most likely surface elsewhere throughout the range of the desert tortoise.

9. Secondary Trend Evaluation

The entire area should be monitored for desert tortoises using the secondary trend evaluation technique. This is to be done in 1990 and should be repeated annually or at two to four year intervals depending on availability of funding.

APPENDIX G

GLOSSARY

ACEC:	Area of Critical Environmental Concern
BLM:	U.S. Bureau of Land Management
CDFG:	California Department of Fish and Game
CDCA:	California Desert Conservation Area
DTNA:	Desert Tortoise Natural Area
Designated Open Routes:	A signed, numbered route open for vehicular travel that have been formally designated through the route designation process
EA:	Environmental Assessment
FLPMA:	Federal Land Policy and Management Act
USFWS:	U.S. Fish and Wildlife Service
HMA:	Habitat Management Area
Limited Route:	A vehicle road or trail that is designated for use with numbered signs or posts and has special limitations. All other unmarked roads or trails are closed to use.
MFP:	Management Framework Plan
MOU:	Memorandum of Understanding
MUC:	Multiple Use Class
OHV:	Off Highway Vehicle
RIMS:	Recreation Information Management System

ROW:	Rights-of-Way
Tortoise Habitat: Categories I, II, III	Categories of desert tortoise habitat, each with range of management actions. See Table 2 in the Plan for specific criteria and policies for each category.

APPENDIX H

U.S. Fish and Wildlife Service Terms and Conditions

The following Terms and Conditions were developed by the USFWS and included in their Section 7 Biological Opinion. These will apply to actions that may affect the desert tortoise.

1. All construction personnel shall be informed of the desert tortoise and its federal status. They shall be directed to avoid all contact with the desert tortoise. Personnel shall be advised that handling, harming, or harassing desert tortoises without specific authorization is a violation of the Act. Personnel shall also be advised of the potential penalties up to a \$25,000 fine and 6 months in prison for taking a listed species without a permit. Handouts summarizing this information shall be provided.
2. The boundaries of construction areas shall be clearly marked with flagging or stakes. All construction workers shall strictly limit their activities and vehicles to marked areas to eliminate adverse impacts to desert tortoises and their habitat. All workers shall be instructed that their activities are restricted to marked areas.
3. An individual shall be designated as a field contact representative (FCR) who shall have the authority to ensure compliance with protective stipulations for the desert tortoise and be responsible for coordination with the USFWS. Such designated representative shall have the authority to halt activities that are in violation of USFWS stipulations.
4. Whenever possible, all project-related vehicle traffic, including personal vehicles, shall be restricted to established roads and previously disturbed areas. No off-road vehicular activity shall occur unless the area has been cleared by the biological monitor pursuant to term and condition 7.
5. Overnight parking and equipment storage shall be contained within marked construction areas. Immediately prior to moving vehicles, workers shall inspect underneath any parked vehicle. If a desert tortoise is found beneath a vehicle, an authorized desert tortoise biologist shall be contacted to move the animal out of harm's way, or the vehicle shall be left in place until the desert tortoise has left on its own accord.
6. All trash and food items generated by construction personnel shall be contained in raven-proof containers and removed regularly from the project site.

7. A biological monitor shall be present during all construction and pre-construction activities that could result in a take of desert tortoise. The monitor shall re-survey and locate all desert tortoises and their burrows in areas to be disturbed by construction.
8. If construction activities would produce a permanent hazard to the desert tortoise, the construction site shall be enclosed by a desert tortoise barrier fence and all desert tortoises at the site relocated to a safe location outside the fence (see terms and conditions 10, 11, 12, and 13). Once the barrier fence is constructed and all desert tortoises are relocated, the biological monitor would no longer be needed.
9. If a desert tortoise or its burrow is found in an area to be disturbed by construction, the biological monitor shall work with the construction supervisor to take steps as necessary, including altering project boundaries, to avoid damaging a burrow or disturbing a desert tortoise. For burrows outside of the actual area of disturbance, the biological monitor shall consider the direction the burrow runs, and that burrows may be as long as 30 feet, in determining whether or not action is necessary to avoid take.
10. If it is not possible to avoid disturbance to a desert tortoise or an occupied burrow, the animal shall be relocated by an authorized desert tortoise biologist (see term and condition 13) a short distance away from the project site in the direction of undisturbed habitat. If the relocation occurs in the season of above-ground activity, the desert tortoise shall be placed in the mouth of a burrow of appropriate size or in the shade of a large shrub. If the relocation is not in the season of above-ground activity, desert tortoises shall be moved on a seasonally warm day and placed at the mouth of a burrow of appropriate size. All excavation of desert tortoise burrows shall be done by hand tools, either by or under the direction of a qualified biologist. If the desert tortoise does not enter the burrow, or a burrow is not available, an artificial burrow shall be constructed and the desert tortoise placed within it. Artificial burrows shall be at least 6 feet in length and of the same diameter, depth, and orientation as the one in which the desert tortoise was found or as appropriate for the size of the subject desert tortoise. Wood or plastic materials may be used to strengthen the tunnel and/or chamber of the burrow. In coordination with the USFWS and the BLM, the authorized desert tortoise biologist shall be allowed some judgement and discretion to ensure that survival of the desert tortoise is likely.
11. Relocated desert tortoises shall be photographed and their condition noted, particularly whether or not they show symptoms of URTD or other ailments. This information shall be summarized in the report to the USFWS described in Term and Condition 32 of the Biological Opinion.
12. Each desert tortoise requiring relocation found above ground within 3 hours of nightfall or when ambient air temperatures exceed 90 degrees Fahrenheit shall be placed in a clean

disposable cardboard box and held overnight in a cool location. The box shall be covered and kept in possession of an authorized biologist. The desert tortoise shall be released the next morning in accordance with terms and conditions 10, 11, and 13. Disposable latex gloves shall be used to handle all desert tortoises. Cardboard boxes used to hold desert tortoises and latex gloves shall be new, used once, and discarded. All materials which come into contact with desert tortoises shall be used only once and then properly discarded to minimize contact with the causative factor(s) for URTD and other diseases.

13. Only persons authorized by the USFWS under the auspices of this biological opinion shall be permitted to handle desert tortoises that may be found during this project. The USFWS authorizes Bob Parker, Kathy O'Connor and Larry Foreman to handle desert tortoises. If other persons are needed to handle desert tortoises, the BLM shall supply the USFWS with the name(s) and credentials of these persons at least 15 days prior to project construction start. The USFWS will review these credentials and approve or disapprove candidate desert tortoise handlers. All handling of desert tortoise shall be in accordance with protocol adopted by the USFWS (Arizona Game and Fish Department et al., 1991).

Disposition of Dead, Injured, or Sick Desert Tortoises

Upon locating dead, injured, or sick desert tortoises, initial notification must be made to the USFWS's Law Enforcement Office in Torrance, California at (310) 297-0062 within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph, and any other pertinent information. The notification shall be sent to the USFWS's Torrance office with a copy to the Ventura Field Office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. If possible, the remains of intact desert tortoises shall be placed with educational or research institutions holding the appropriate State and Federal permits. If such institutions are not available or the shell has been damaged, the information noted above shall be obtained and the carcass left in place. Marking the carcass in a manner that would not be toxic to other wildlife to ensure that it would not be re-recorded in the future, should be considered.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution prior to implementation of the action. Injured animals should be transported to a qualified veterinarian by an authorized desert tortoise biologist. Should any treated desert tortoises survive, the USFWS should be contacted regarding the final disposition of the animals.

APPENDIX I

Environmental Assessment For The Rand Mountains- Fremont Valley Management Plan

Environmental Assessment Number EA-CA065-89-21

Kern County, California

**United States Department of the Interior
Bureau of Land Management
California Desert District
Ridgecrest Resource Area**

October 1989

I. INTRODUCTION

A. NEED FOR THE PROPOSED ACTION

The Desert tortoise populations throughout the Mojave Desert have experienced severe declines since study plots were established in the mid-1970's. The situation has become so serious that the tortoise has been listed as threatened by the State of California and as endangered by the USFWS.

In the Fremont Valley area, the tortoise population suffered a decline of about 50 percent from 1981 to 1987. Almost half of the losses were attributed to vandalism and vehicle kills. In addition, an upper respiratory disease has reached near epidemic proportions in the area. In 1989, a cursory sweep of the study plot in Fremont Valley revealed several recently dead tortoises, and 44 percent of the observed live tortoises had symptoms of the disease.

A comprehensive management plan is needed to guide management actions and develop measures that will alleviate decline of tortoise populations and improve habitat. The proposed Plan addresses all land use activities which impact the tortoise.

B. LAND USE PLANNING

The Western Rand Mountains Area of Critical Environmental Concern (ACEC) was established in 1980 in the California Desert Conservation Area (CDCA) Plan. The CDCA Plan provides general guidance for management of the California Desert. Pursuant to the guidance of the CDCA Plan, this management Plan is being developed for the ACEC and the adjoining tortoise habitat. As such, the management Plan would establish specific management actions to stabilize and enhance desert tortoise populations and is in conformance with the CDCA Plan.

In 1988, the U.S. Bureau of Land Management (BLM) formed a Technical Review Team (TRT) to develop recommendations for management of the Western Rand Mountains ACEC. Since the tortoise population and habitat overlap into the Rand Mountain-Fremont Valley area, it was agreed the management Plan should include the ACEC and the adjacent Rand Mountains-Fremont Valley area (hereafter referred to as the management area).

BLM planning decisions also established the Desert Tortoise Natural Area (DTNA), which adjoins the management area along the southwest boundaries. An adequate

management Plan is in place for the DTNA, and that special area is not included in the management area under discussion here. However, actions taken in the management area are intended to complement and conform to the Plan in place for the DTNA.

II. PROPOSED ACTION AND ALTERNATIVES

A. PROPOSED ACTION

The proposed action is to adopt the comprehensive management Plan for the Rand Mountains-Fremont Valley Management Area. Adoption of the Plan would implement the prescriptions, restrictions, and other management actions described therein. These would include closures of sensitive areas and mitigation measures on all activities that adversely affect the desert tortoise and its habitat. The Plan would reduce or eliminate conflicting uses in the management area and afford protection for the desert tortoise.

The following specific management actions are prescribed in the proposed management plan.

1. Wildlife

Implement actions that will provide positive benefits to desert tortoise populations and habitats (see page 29 of the management plan).

- a. Expand the existing West Rand ACEC and Class L areas (Illustration No. 6 of the management Plan). This action will better protect sensitive resources.
- b. Categorize desert tortoise habitat based on current BLM direction and policy to reflect relative quality, importance, etc. (See Illustration No. 9 of the management Plan.)
- c. Implement educational and enforcement actions to prevent the uncontrolled return of captive desert tortoises into the management area.
- d. Enhance compliance with Plan restrictions and existing regulations through greater deployment of BLM rangers, aerial observation flights, and support from allied law enforcement agencies. This would reduce resource damage from unauthorized activities.

- e. Reduce raven predation on desert tortoises through control of raven numbers, reduction of artificial perches, etc.
- f. Develop recommendations and possible mitigation to arrest spread of respiratory disease.
- g. Consider and evaluate the impacts of expanding the DTNA into the existing Western Rand ACEC (see **Illustration No. 6**).
- h. Require full mitigation of and/or compensation for impacts to the tortoise and its habitat through authorized actions.
- i. Implement monitoring studies to determine specific interactions between the desert tortoise and livestock grazing and motorized vehicle use.
- j. Relocate projects as possible to avoid tortoise burrows.
- k. Where appropriate and feasible, construct tortoise-proof fences and tortoise underpasses along major public roads to allow for reduction of hazards to migrating tortoises.
- l. When authorized actions result in unavoidable destruction of tortoise burrows, relocate animals to Category I and II habitat.
- m. Require erection of temporary tortoise fences around construction and work areas during periods of tortoise activity.
- n. Remove feral dogs, cats, and other non-native feral animals from the management area.
- o. Allow no major surface disturbing activities by authorized users from March 1 to June 30 of each year unless necessary to respond to an emergency situation.
- p. Conduct pre-construction briefings ("tailgate sessions") for any crews working in area to increase understanding of use restrictions and educate workers about the sensitivity of the desert tortoise and Mojave ground squirrel.

2. Minerals

Implement actions to minimize conflict with the desert tortoise (see Illustration No. 7 of the management Plan).

- a. Withdraw 44,800 acres of the area from mineral location to limit impacts to sensitive wildlife resources, with emphasis on the desert tortoise and Mojave ground squirrel (see Illustration No. 7 of the management Plan).
- b. Do not allow new authorizations for mineral material removal except in cases of emergency (flash floods, etc.).
- c. Reject mineral leasing applications requiring surface occupancy within the management area, with the exception of Koehn Lake.
- d. Within the scope of current regulation, limit new disturbance from existing mining operations to reduce impacts on wildlife.

3. Grazing

Any future sheep grazing will be dependent on decisions made under a separate consultation with USFWS.

4. Vegetation

- a. Monitor trends of vegetation condition and develop prescriptions to enhance the resource. Do not allow commercial sales of creosote or other vegetation in the management area. Manage vegetative resources commensurate with its crucial importance to wildlife populations.
- b. Rehabilitate disturbed areas to increase their value as wildlife habitat.

5. Recreation/Access

Implement actions to eliminate impacts to the desert tortoise and to reduce damage to public land resources within the management area resulting from recreational uses, especially off-highway vehicles (OHVs) (see Illustrations No. 6, 8 and 11 of the management Plan).

- a. Prohibit competitive, motorized OHV events within the Western Rand ACEC, including the proposed expansion area.
- b. Restrict discharge of firearms to shotguns used for hunting during the hunting

season.

- c. Restrict hunting to the Class M area and to upland and mountain areas (out of valley bottom) in Class L areas.
- d. Limit camping to areas that have been designated for camping and only outside of the proposed expanded ACEC area. Camping would not be allowed in the ACEC.
- e. Close the management area to unrestricted vehicle use. Implement actions to reduce vehicle and access impacts on the desert tortoise. Permanent vehicle closure or restrictions would require amendment of the CDCA Plan, would include specific vehicle closure guidelines, and would designate a system of routes which would be open for specific uses. A maximum of 20 percent of the existing routes in the proposed expanded ACEC and 50 percent of the routes in the remaining management Plan area would be designated as open for access (see Illustration No. 8 of the management Plan).
- f. Implement an active public outreach and educational program including use of video spots on regional television stations.
- g. Reduce hazards such as mine shafts, open test and assessment pits, trenches, and similar hazards to protect humans and animals.
- h. Maintain major designated access routes through grading, surfacing, or other means to encourage their use in lieu of closed routes.
- i. Construct a fence along the southern boundary of the management area to limit access to designated open vehicle routes. Access points in the fence would only occur where there is a designated vehicle route leading into the management area. The fence would be constructed to mitigate enhanced raptor and raven perching opportunities and resultant tortoise and Mojave ground squirrel predation.
- j. Install informational and regulatory signs and kiosks at key entry points to provide users with use rules and information on resource sensitivities. These will be necessary to effect visitor compliance.

6. Lands

Implement actions and procedures that would reduce impacts of land use authorizations, and actively pursue acquisition of private lands within crucial tortoise habitat (page 42 of the management Plan).

- a. Whenever possible, limit major new linear rights of way to the U.S. 395 corridor. This corridor was identified as a "contingency" corridor in the CDCA Plan. Consider amending the CDCA Plan corridor designation criteria to allow final designation of this corridor prior to the initiation of new projects.
- b. Reduce raven perching opportunities through modification and mitigation of projects involving tall structures (fences, power lines, etc.).
- c. Retain all public lands within the management area in Federal ownership.
- d. Acquire private lands within the management area as compensation for loss of habitat resulting from actions outside of the management area.
- e. Acquire private lands containing crucial habitat within the management area through exchange or direct purchase.

B. DESERT TORTOISE NATURAL AREA EXPANSION

As an alternative to the proposed management area Plan, the expansion of the DTNA to include 29,440 additional acres to the northeast of the present area was analyzed. This alternative would have involved simply bringing the additional acreage under the same management prescriptions as the current DTNA.

The TRT evaluated this proposal with several members in favor of expanding the DTNA as a means of providing the maximum possible protection for the desert tortoise habitat in Fremont Valley. The majority of TRT members felt that the expansion was not warranted at this time but should be kept as a possible alternative in the future.

It was decided not to expand the DTNA at this time for several reasons. Expansion would require additional funds which are needed for current desert tortoise research and management work. There is a need to concentrate on solving the existing disease and raven predation problems which will not be solved by expanding the DTNA. Once the Rand Mountains - Fremont Valley Management Plan is finalized and its effectiveness determined, the expansion can be reconsidered to determine if

it would be needed.

C. OTHER ALTERNATIVES CONSIDERED - NOT ANALYZED

A variety of other possible actions were considered during six Rand TRT meetings. The expansion of the existing DTNA to include the expanded ACEC area was a principal alternative to the proposed action. This was rejected since available data did not support such a restrictive use designation. It was determined that expansion of the existing Western Rand ACEC into the Category I habitat of Fremont Valley would provide sufficient management opportunities to protect the desert tortoise and other sensitive resources.

Another alternative considered was to leave the entire area outside the expanded ACEC as Class M and not reduce the number of existing vehicle routes. This was rejected since the alluvial fan portions of that area are valuable desert tortoise habitat. Failure to plan for actions to protect this resource were considered unacceptable.

The scoping alternatives were discarded for the reasons stated, and will not be discussed further.

D. NO ACTION

Under the no action alternative, the area would continue to be managed under the CDCA Plan land use classifications and guidelines, with no changes in management activities. Under current CDCA Plan management, the management area is managed to allow a variety of multiple uses, such as mineral development, hunting, OHV use, grazing, and transportation and infrastructure improvements.

III. AFFECTED ENVIRONMENT

A. GENERAL SETTING

The management area is located in eastern Kern County immediately north of California City (see **Illustration No. 1** of the Management Plan). The area consists of 65,020 acres with the majority of the area (60,370 acres) managed by the BLM. It includes the Rand Mountains, Fremont Valley, Koehn Dry Lake, and Western

Rand ACEC. The area is mostly proposed Category I habitat which is used for recreational activities, grazing, and mining.

The reader is referred to Appendix A of the Management Plan and to the Environmental Impact Statement prepared for the CDCA Plan for detailed descriptions of the environment and uses in the management area. The following summary descriptions provide basic resource information adequate to this assessment.

B. AFFECTED RESOURCES

1. Wildlife

Important wildlife resources in the management area in order of their sensitivity are the desert tortoise, Mojave ground squirrel, burrowing owl, desert kit fox, golden eagle, prairie falcon, and chukar.

The severe decline in the native desert tortoise population could not be controlled without instituting changes in current use activities that are impacting the desert tortoise. Activities associated with human presence have been identified as contributing to the decline of the tortoise. The interaction of these uses with natural phenomena such as droughts has produced negative impacts to tortoises and other wildlife. Tortoises have survived severe climatic conditions for at least 3- 4 million years so it is not likely that an event such as the current drought would be enough by itself to cause the extinction of the desert tortoise.

The management area contains about 110 square miles of crucial desert tortoise habitat, which is part of the larger Fremont-Stoddard Crucial Habitat Area as defined in the CDCA Plan. Studies are showing up to a 50 percent reduction in the native desert tortoise population within the past 10 years as a result of a variety of factors. Known direct and indirect factors that are causing the decline in the population include disease, OHVs, collecting, shooting, raven predation, and grazing.

2. Minerals

Four basic rock types outcrop within the management area with recent alluvial deposits covering the lower areas and bedrock exposed along the higher crest of the Rand Mountains. The management area encompasses a portion of the historical Rand and Atolia Mining Districts, known primarily for production of gold, silver, and tungsten.

There is a high potential for future discoveries of hard rock metal deposits in the exposed bedrock areas, and the older alluvium has a moderate to high potential for future deposits of placer gold in locally reworked channels.

3. Grazing

The management area is within the Cantil Common Sheep Allotment and comprises 22 percent (65,020 acres) of the allotment area. Fifteen permittees graze sheep within the allotment in the spring, using primarily ephemeral (seasonal) vegetation. All permittees can graze anywhere within the allotment, including the management area. In normal years, eight or more sheep bands (about 800 sheep per band) may spend part of the grazing season within the management area. Sheep are moved continuously through the area while grazing, along with the herders' camps and support vehicles. Since natural surface water is not available, water is hauled to the sheep by truck.

4. Vegetation

The area supports a high diversity of vascular plants with 154 species of annual and perennial plants identified in the area. There are four vegetation communities within the area: Creosote Bush Scrub, Joshua Tree Woodland, Alkali Sink Scrub, and Creosote Bush-Rocky Slope. Three species of special concern may occur in the Management Area and are described in Appendix A, Environment of the Management Area.

5. Recreation

The area receives a moderate level of recreational use involving a variety of activities. Most common recreational uses are organized and unorganized OHV riding, rockhounding, hunting, target shooting, camping, and sightseeing. Since 1972, there have been 220 BLM authorized OHV events with 76,000 participants. From 1982 through 1989, the number of events was drastically cut back and there have been no events authorized since 1990 in the management area.

6. Lands

The majority of the area is public land administered by the BLM, with 640 acres of State land and 4,010 acres of private land. Most of the area is not impacted by transportation or utility systems but the peripheral portions are. The east and south sides are affected by existing high voltage electrical transmission lines and a gas pipeline, and U.S. 395 is a designated contingency corridor in the CDCA Plan.

7. Cultural Resources

Cultural resources are known to be present in the management area. Prehistoric site loci are probably present, but adequate intensive inventory work is not available to allow detailed analysis of these values. The eastern Rand Mountains was the site of historic mining activities, and many remains of these activities are present. No known significant sites eligible for listing on the National Register of Historic Places are located in the management area.

8. Socio-Economic Setting

The economy of the area surrounding the management area is based on government programs (such as defense installations), tourism and recreation, mineral production, agriculture (alfalfa farming and grazing) and normal infrastructure and service industries. The population centers of California City and Mojave lie to the southwest, and Randsburg/Johannesburg/Red Mountain and Ridgecrest to the northeast.

Mojave is a historical railroad center and has become an important transportation hub both on the Southern Pacific Railroad line and at the junction of Highways 58 and 14. California City has been recently developed as both a "bedroom" community for Edwards Air Force Base and as a retirement area. The Randsburg area was developed in the late nineteenth and early twentieth centuries as a mining area, and although populations have declined, active mining still occurs. Ridgecrest supports the China Lake Naval Weapons Center and is a rapidly growing community attracting a large number of retirees. There are no regionally significant commercial operations within the management area.

9. Other Critical Resources

In addition to the resources discussed elsewhere herein, the following critical items have been determined to be absent from the management area or would not impact or be impacted by the proposed action or alternatives:

- a. Air Quality
- b. Prime and Unique Farmlands
- c. Floodplains
- d. Native American Religious Concerns
- e. Solid and Hazardous Waste Concerns
- f. Drinking and Ground Water Quality
- g. Wetlands and Riparian Zones

- h. Wild and Scenic Rivers
- i. Wilderness and Wilderness Study Areas

IV. ENVIRONMENTAL IMPACTS

A. PROPOSED MANAGEMENT PLAN

1. Wildlife

Actively working to prevent the return and release of captive desert tortoises will help control the spread of disease. Measures involving immunization, fencing, etc., will be taken to help stop the spread of the respiratory disease. Reducing raven predation will remove a significant source of mortality in young desert tortoises. The reduction in OHV use and events and general access will lower the mortality of desert tortoises from vehicle hits and will reduce habitat destruction. Authorizing OHV events only during the period of desert tortoise inactivity will also reduce direct mortality. Authorizing enduro events only and not allowing mass starts will reduce the disturbance common when large numbers of OHVs start from the same area.

Acquiring private lands both inside and adjacent to the Plan area will provide additional habitat for the desert tortoise and should allow development of a larger population base. Expansion of the Western Rand ACEC will further minimize impacts from impacting uses currently allowed on open public lands.

Requiring full mitigation of, or compensation for impacts would be beneficial to wildlife, especially the desert tortoise. Better protecting existing habitat and providing additional habitat enhancement when impacts do occur would generally enhance the probabilities of survival of the desert tortoise as a wildlife species.

Use of more comprehensive monitoring studies to determine specific interactions between the desert tortoise and livestock grazing and OHV use will be helpful in determining exactly to what degree these activities affect the desert tortoise. Such studies are also needed to determine how to effect recovery of the desert tortoise population.

Vehicle use within the management area on designated open routes would continue to impact crucial desert tortoise habitat. However, the route closures prescribed in the Plan would limit these impacts up to 80 percent from current levels, since 50-80 percent of existing routes would be closed. Vehicle crushing and habitat destruction

from vehicles illegally going off designated routes would be the major adverse impacts from leaving some routes open as proposed. Impacts associated with the human access provided by vehicles, such as illegal shooting, vandalism, taking of animals, release of domesticated tortoises, cats and dogs, and similar activities would continue to negatively impact wildlife habitat. The strict enforcement prescribed by the Plan should mitigate these impacts. The proposal would allow routes closed to be reclaimed, would significantly reduce impacts from current levels, and would promote overall habitat improvement.

Withdrawal of areas from mineral entry and location as proposed would prevent loss of habitat to mining. Limitation of new mineral material sales and denying surface occupancy under the mineral leasing laws would provide additional protection for the desert tortoise, the Mojave ground squirrel, and their habitat.

The following brief analysis is provided for the impacts of specific proposed Plan actions on wildlife; other actions will have positive impacts on the desert tortoise.

- a. Fencing along the southern boundary would reduce impacts from vehicles and camping. Signing would reduce occurrence of detrimental actions. Fence and sign installation could have the impact of providing additional roosting perch locations for raptors and ravens, which could negatively impact sensitive species. These actions would require careful site-specific environmental analysis to weigh positive versus negative impacts.
- b. Grading major designated access routes would encourage their use in lieu of closed routes. Negative impacts to habitat or individual animals from maintenance operations on existing roads would be limited to non-existent.
- c. An aggressive public education program, including worker briefings, informational and regulatory signs, media advertising, and public outreach through schools and organizations should significantly raise public awareness, compliance, and cooperation.
- d. Prohibition of vegetation harvesting would have long term benefits in protecting habitat and would reduce incidental injury to animals during harvesting operations.
- e. Enforcement of county leash and animal control ordinances and eliminating feral animals would reduce desert tortoise mortality, although precise numbers cannot be identified due to lack of data.

- f. Reduction of hazards such as open holes and shafts would reduce mortality of desert tortoises. This would be accomplished by preventing their falling into shafts and holes from which they cannot escape.
- g. Construction of tortoise fences around construction sites and other hazards and providing culvert underpasses across major roads would reduce direct loss of animals by preventing their being crushed by vehicles and machines, and from biologically undesirable contact with humans.
- h. Not allowing any major surface disturbing activities from March 1 to June 30 of each year (periods of peak tortoise activity) would reduce impacts to individual animals. Although sheep grazing could be authorized during this period, controls as proposed would help minimize adverse impacts.
- i. Relocating projects to avoid desert tortoise burrows would reduce impacts and should be the preferred action. Requiring tortoise relocation to Category I and II areas is very stressful, with high rates of mortality. Relocation should only be done during the spring when conditions are favorable.
- j. Requiring proper, supervised surface rehabilitation of disturbed areas would help establish the soil conditions favorable for burrow construction and natural re-establishment of native vegetation, which will increase habitat.
- k. Firearm use restriction will reduce desert tortoise mortality from illegal shooting. Studies show that the majority of wounds are from rifles and not shotguns. Thus, conflicts between upland game hunting (with shotguns) and sensitive wildlife should be minimal.

Informal consultation regarding desert tortoise was undertaken with the USFWS on September 9, 1989. At that time USFWS found nothing in the proposed Plan that would create an adverse impact to the desert tortoise. Formal consultation is not required at this time because implementation of the Plan is not expected to result in any negative impacts to sensitive species. Individual actions will be reviewed at the time of consideration if effect on sensitive species appears possible. Future actions determined to have possible effects on the tortoise would require consultation with USFWS pursuant to Section 7 of the Endangered Species Act.

2. Minerals

Segregation of portions of the management area as proposed would prevent

exploration and development of locatable mineral resources on those lands. Although detailed information is not available, the lands proposed for withdrawal appear to be only marginally valuable for mineral production. The potentially most productive portions of the management area would remain open to entry and location under current standards, thus lessening the impacts of the proposed action on the development of locatable resources. Losses associated with the denial of mineral leases and mineral material sales would have limited effects due to the low values perceived and the availability of these resources elsewhere in the vicinity.

Mining would still be allowed in the Class M area, which is the highly mineralized zone where most existing claims are concentrated. Miners with claims within areas to be withdrawn will be economically impacted by loss of income. Operators with claims elsewhere in the management area will be required to file additional paperwork and may be required to spend additional money on mitigation and compensation.

3. Grazing

The future of grazing in the Plan area will be determined under a separate consultation with the USFWS.

4. Vegetation

The net effects of various actions proposed would result in improvements to natural vegetation. The degree of improvement cannot be accurately quantified due to the variability of weather conditions. No negative impacts to vegetation have been identified as a probable result of any of the proposed actions.

5. Recreation/Access

The proposed management plan would significantly reduce recreational opportunities in the Rand Mountains and Fremont Valley while displacing current recreational use, and its related impacts, to other areas. The major use reductions in the management area would be due to the closure of the majority of the roads and trails currently available for OHV use.

A reduction of approximately 650,000 visitor hours per year in OHV related activity can be anticipated due to road and trail closures, competitive event restrictions and camping limitations (based upon 80 percent reductions from the 1988-89 Recreation Information Management System Report for the Rand Mountain/DTNA Special Recreation Management Area).

A large percentage of the displaced OHV use will most likely be transferred to the nearby Jawbone Canyon, Dove Springs, and Spangler Hills OHV Areas. The Spangler Hills area has already experienced a 100 percent increase in competitive OHV events since 1987 due to interim management restrictions on conducting events in the Rand Mountain-Fremont Valley Management Area (Jawbone Canyon and Dove Springs OHV Areas are too small for competitive events). Displacing large numbers of noncompetitive OHV users to Spangler Hills will increase the number of user conflicts, threaten the safety of OHV competitors and increase resource impacts in the Spangler Hills area due to the widening of OHV roads and trails.

Hunting opportunities for upland game in the management area should be enhanced eventually due to decreased competition with OHV users and resulting improved habitat.

Target shooting would be effectively eliminated from the management area. This is not anticipated to be a significant impact on shooters, however, due to many other suitable sites outside the management area for this activity.

Most rockhounding currently occurs in the eastern portion of the management area, and the limited changes in the vehicle access system would not significantly impact this recreational activity.

6. Lands

The proposed management Plan may result in additional operational costs for existing right-of-way users due to additional mitigation measures. Full implementation of all mitigation and use constraints may result in effective elimination of the U.S. 395 utility corridor as an economically viable route for major linear facilities. This may negatively impact utility systems regionally, due to the lack of viable alternative corridors. Conversely, designating U.S. 395 as a utility corridor could have long-term benefits for the desert tortoise through concentrating the utility impacts to just one alignment.

7. Socio-Economic Impacts

Acquisition of private lands for retention as habitat will have negative impacts to local tax revenues. Loss of grazing use would impact the agricultural productive capacity of the region, although not significantly, as impacts would be most severe to individual sheep growers. The loss of recreational opportunities and elimination of competitive events would have adverse impacts to both the sponsors and vendors

who profit from these activities, as well as denying a recreational use enjoyed by numerous people locally and regionally.

Existing mining operations would be allowed to continue, therefore avoiding any impacts other than possibly tighter restrictions. However, miners with undeveloped claims in areas to be withdrawn would be economically impacted by loss of potential income. Operators with claims elsewhere in the management area will be required to file additional paperwork and may be required to spend additional money on mitigation and compensation.

Economic impact would be significant to the three herders and camp tenders who may lose employment. The impact to the one or more operators could be significant enough to cause the loss of their family business if additional costs to maintain current operations exceed profit margins. Since the reduction would be spread proportionately among the users based on preference, the impact to the operators taking the larger reductions would be severe. Losses due to the decrease in available forage, especially in low-production years, would vary. Estimated annual sales losses from the reduction of three bands of sheep is \$235,000 (\$200,000 from lamb sales and \$35,000 from wool sales).

Although economic impacts to some individuals, especially sheep growers, would be significant, the proposed action should not result in significant economic loss to the larger southern California area.

8. Cultural Resources

The proposed action would have a net beneficial effect in the protection of cultural resource values that may exist within the management area. This benefit would result from the limitations placed on vehicle use and general public access. The significant decrease in human activity in the management area would tend to lessen the incidents of both inadvertent and willful destruction of any cultural resources present.

B. NO ACTION ALTERNATIVE

This alternative would result in no new environmental consequences for the various present use activities. However, use changes are necessary in order to comply with Federal law and provide adequate protection of the desert tortoise. Changes are also mandated by law pursuant to the State listing of the desert tortoise as a protected species. The severe decline in the native desert tortoise population would not be

reversed without instituting changes in current uses that impact the desert tortoise within the management area.

Activities associated with human presence have been identified as contributing to the decline of tortoise numbers. Not restricting these activities would allow uses to continue that are detrimental to the existence of the tortoise as a species. The interaction of these uses with natural phenomena such as droughts has produced increased negative impacts to tortoises and other wildlife.

The current downward trend of the tortoise population would continue. Between 1981 and 1987, the population at the Fremont Valley Study plot dropped from a density of about 278 per square mile to 179 per square mile (Berry, 1988). A sample in 1989 indicated that about half of the active tortoises had the respiratory disease. At the current rate of decline, the population would approach zero by 2020. With the respiratory disease, this rate of decline could proceed at twice the speed or greater.

Several factors currently affecting tortoises would continue under the No-Action Alternative. Berry (1988) lists the factors contributing to abnormally high rates as vandalism and shooting, raven predation, vehicle kills, poaching, trampling by sheep, and habitat deterioration. Adoption of this alternative would appear to place the BLM in a position of non-compliance with the Endangered Species Act.

V. MITIGATION

A. PROPOSED ACTION

The proposed action would be implemented for the purpose of mitigating current impacts to sensitive wildlife species. The mitigation appropriate for consideration as a result of the adverse impacts of the proposed action would involve measures to ease financial and operational hardships to individuals and firms currently enjoying productive or recreational use of the public lands in the management area. Mitigation would also be appropriate to alleviate adverse socio-economic hardships to future, predicted users. These adverse impacts have been given due consideration during the formulation of the Plan through use of the TRT process and other public participation. As a result of this consideration, proposed Plan prescriptions have been developed that would produce the least adverse impacts while still accomplishing the management goals set for the Plan. Thus the mitigation of these impacts is built into the management actions proposed in the Plan.

B. NO ACTION ALTERNATIVE

The primary negative impact of the alternative would be the lack of apparent compliance with the Endangered Species Act. Mitigation required would involve treating individual authorizations and proposals on a case-by-case basis. The danger of this approach is that comprehensive planning as required by law may not occur, and negative cumulative impacts may accrue to the sensitive wildlife species.

VI. RESIDUAL IMPACTS

A. PROPOSED ACTION

Residual impacts to wildlife will be the reduction of released captive tortoises spreading disease to wild animals; the reduction in raven predation leading to increased juvenile survival; an increase in knowledge of the upper respiratory disease and possible recommendations to reduce its impact; and an increased knowledge from studies on the impacts of grazing, recreation, and other factors on tortoises and other wildlife.

The proposed action would decrease the available mineral resource production within the management area over the long term.

The proposed action would result in net long-term and residual loss of recreation opportunities within the management area, especially OHV use. This would displace use to other areas in the immediate area. This displacement may cause more severe impacts to those public lands, and may in fact result in additional impacts to the desert tortoise within its habitat outside the management area. Limitations on access may cause long-term residual impacts to private land owners needing access through the management area to economically develop their properties.

B. NO ACTION

By not limiting conflicting uses on public land, and by not acquiring private land in and around the management area, the area would continue to be open to new

developments that could have a negative impact on sensitive wildlife species. Residential, mining, and agricultural developments and other projects generally create negative impacts on tortoise habitat as well as on the animals themselves. The residual impact of no action could be significantly negative to sensitive species over time.

VII. CUMULATIVE IMPACTS

A. PROPOSED ACTION

The negative impacts of limiting use and access in the management area would not be significant. However, there is a clear cumulative impact on multiple use opportunities regionwide due to the increased sensitivity of the desert tortoise and other sensitive species and the limitations and restrictions that are required to effect protection of wildlife species and their habitats. Uses, particularly those resulting in possible wildlife and habitat impacts, are coming under increasing scrutiny and restriction throughout the Mojave Desert.

Users particularly impacted are OHV users and miners. With closures and use limitations being instituted throughout the Mojave region, with the various resource management agencies actively acquiring private lands, and with proposed military area expansions, less land is available for traditional multiple use management. More than some users, OHV users and miners perceive a bias against their pursuits and increasing limitations on their activities.

While these cumulative impacts to users are real, the Endangered Species Act and other laws and regulations directing the protection of these resources provide little latitude to allow continued activities that would result in negative impacts, including the failure to take action to protect the resources. The proposed Plan, as developed, should lessen cumulative impacts to users as much as possible.

B. NO ACTION

Current BLM management policy allows a wide range of multiple uses on the majority of public lands in the Mojave region. Some of these uses, or in some cases unauthorized activities associated with them, can result in impacts to wildlife habitat and other sensitive resources. Under normal circumstances, the minor impacts of individual actions and uses are not significant. However, in a situation such as the current precarious position of the desert tortoise, even minor and

normally acceptable impacts such as loss of individual animals or loss of small portions of habitat are not acceptable. Continued allowance of these activities and uses would have a cumulative negative impact on the desert tortoise within the management area, with cumulative impacts when analyzed regionwide.

VIII. CONSULTATION/COORDINATION AND PREPARERS

A. CONSULTATION/COORDINATION

In addition to BLM staff, the following were consulted in the development of the proposed action and this environmental assessment:

- Rand Mountains-Fremont Valley Technical Review Team (this team represented various affected groups and agencies - see Appendix D of the Plan).
- California Department of Fish and Game
- U.S. Fish and Wildlife Service

B. LIST OF PREPARERS

A complete list of preparers of this assessment is found in Appendix D of the Plan.

C. REFERENCES

Berry, K. 1988. The Status of Desert Tortoise Populations in the Western Mojave Desert. BLM Report prepared for TRT meeting, 9/22/88.

The California Desert Conservation Area Plan (as amended), Bureau of Land Management, California State Office, 1980.

Final Environmental Impact Statement and Proposed Plan for the California Desert Conservation Area Plan, Bureau of Land Management, California State Office, 1980.

**Supplement to Environmental Assessment For the Rand
Mountains-Fremont Valley Management Plan**

Environmental Assessment Number EA-CA065-89-21

Kern County, California

**United States Department of the Interior
Bureau of Land Management
California Desert District
Ridgecrest Resource Area**

April 1993

I. INTRODUCTION

This supplement is to document changes we are implementing as a result of the Biological Opinion received from the USFWS. The USFWS provided Reasonable and Prudent Measures to minimize incidental take of the tortoise, and Terms and Conditions to implement the reasonable and prudent measures. During this Formal Section 7 Consultation process, BLM cooperated in developing the Terms and Conditions with the USFWS.

II. PROPOSED ACTION AND ALTERNATIVES

A. PROPOSED ACTION

The changes in the proposed action as a result of the Biological Opinion are presented below. Those Management Actions that are affected are discussed and analyzed.

1. Wildlife

No changes.

2. Minerals

No changes.

3. Grazing

Grazing within the Management Area would conform to protocols developed under an ongoing Section 7 Consultation dealing with desert-wide sheep grazing. The results could vary from no-grazing for the entire area to grazing as discussed in the original EA.

4. Recreation/Access

- a. Prohibit competitive and non-competitive events, including Enduro-type events, year-round.
- b. Camping would be allowed only at 5 designated sites, outside of the ACEC.

- c. Parking in the management area shall be limited to campgrounds and within 25 feet of designated vehicle routes.
- d. The Management Area will be closed to unrestricted vehicle use, with a system of open routes designated. About 129 miles of routes would be open, down 21 miles from the Plans original 150 miles.

5. Maintenance and Facilities

The original EA did not analyze the impacts from these action because individual EAs will be done for each action. The Southern Boundary fence, road grading, and rehabilitation have been analyzed individually.

D. NO ACTION

There would be no change under this alternative.

III. AFFECTED ENVIRONMENT

There is little change in the affected environment. The number of tortoises lost since 1989 has increased. Disease and drought have increased in importance in mortality since 1989. The area was closed for 1 year in 1989, with the expanded ACEC being closed to people as well.

Grazing has not occurred in the Management Area between 1989 and 1993. There were no organized OHV events permitted in these years as well. The 129 mile network of open routes has been implemented with varying levels of success in compliance. There has been some reclamation of closed routes.

IV. ENVIRONMENTAL IMPACTS

A. PROPOSED MANAGEMENT PLAN

1. Wildlife

The general impacts discussed in the EA would be similar.

Impacts of grazing to wildlife would vary from what is discussed in the EA to lesser or greater impacts. If grazing is eliminated over the entire Management Area, there would be no impacts from grazing. If grazing is expanded into the ACEC, there would be increased impacts to burrows, hatchlings, and habitat. Specific impacts are discussed in the EA.

Impacts from OHV use would be less under the revised Plan. With 21 miles of additional routes closed, there would be a further reduction of impacts from OHVs of about 15% from the original proposal.

Limiting the camping to 5 areas would confine impacts to these areas.

There would be no changes in mining, vegetation, or other activities.

2. Minerals

Impacts to mining would be similar.

3. Grazing

The actual impacts to grazing by sheep would depend on the outcome of the Section 7 Consultation and would be affected by the Western Mojave Coordinate Plan. Under the original scenario, about 10% of the allotment would be affected. It is unknown how much of the remainder of the allotment would be affected by the possible outcomes. There would impacts to wool production, lambs, and employees.

4. Vegetation

With 21 miles of additional roads closed, there would be about 15% additional acreage available for reclamation.

5. Recreation/Access

The revised Plan would only slightly (15%) decrease the number of routes available from the original Plan.

6. Lands

No change from the original Plan.

7. Socio-Economic Impacts

Impacts of the revised Plan would be similar to the original.

8. Cultural Resources

Slightly more area protected from possible OHV impacts on cultural sites.

B. NO ACTION ALTERNATIVE

No change from the original EA.

V. MITIGATION

A. PROPOSED ACTION

Same as for original.

B. NO ACTION ALTERNATIVE

Same as for original.

VI. RESIDUAL IMPACTS

A. PROPOSED ACTION

Will be similar to original proposal, but slightly less (15%) impacts from OHV routes.

B. NO ACTION

No change.

VII. CUMULATIVE IMPACTS

A. PROPOSED ACTION

Similar to original Plan. Slightly less impacts to tortoises and their habitat with no increased impacts to mining, grazing, and some forms of recreation. Would be slightly more impacts to OHV users.

B. NO ACTION

No change.

**VIII. CONSULTATION/COORDINATION
AND PREPARERS**

A. CONSULTATION/COORDINATION

No Change.

ER'S CARD		DATE RETURNED
525 1993 c.2	Office	
of Land		
Ridgecrest		
s, Fremont		
ement plan		

(Continued on reverse)

QH 76.5 .C2 R525 1993 c.2
U. S. Bureau of Land
Management. Ridgecrest
Rand Mountains, Fremont
Valley management plan

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DENVER, CO 80225

Maps

Illustrations 5 and 8

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Rand Mtn/ Fremont Valley

Management Plan

EXISTING VEHICLE ROUTES

Area Boundary

ACEC Boundary

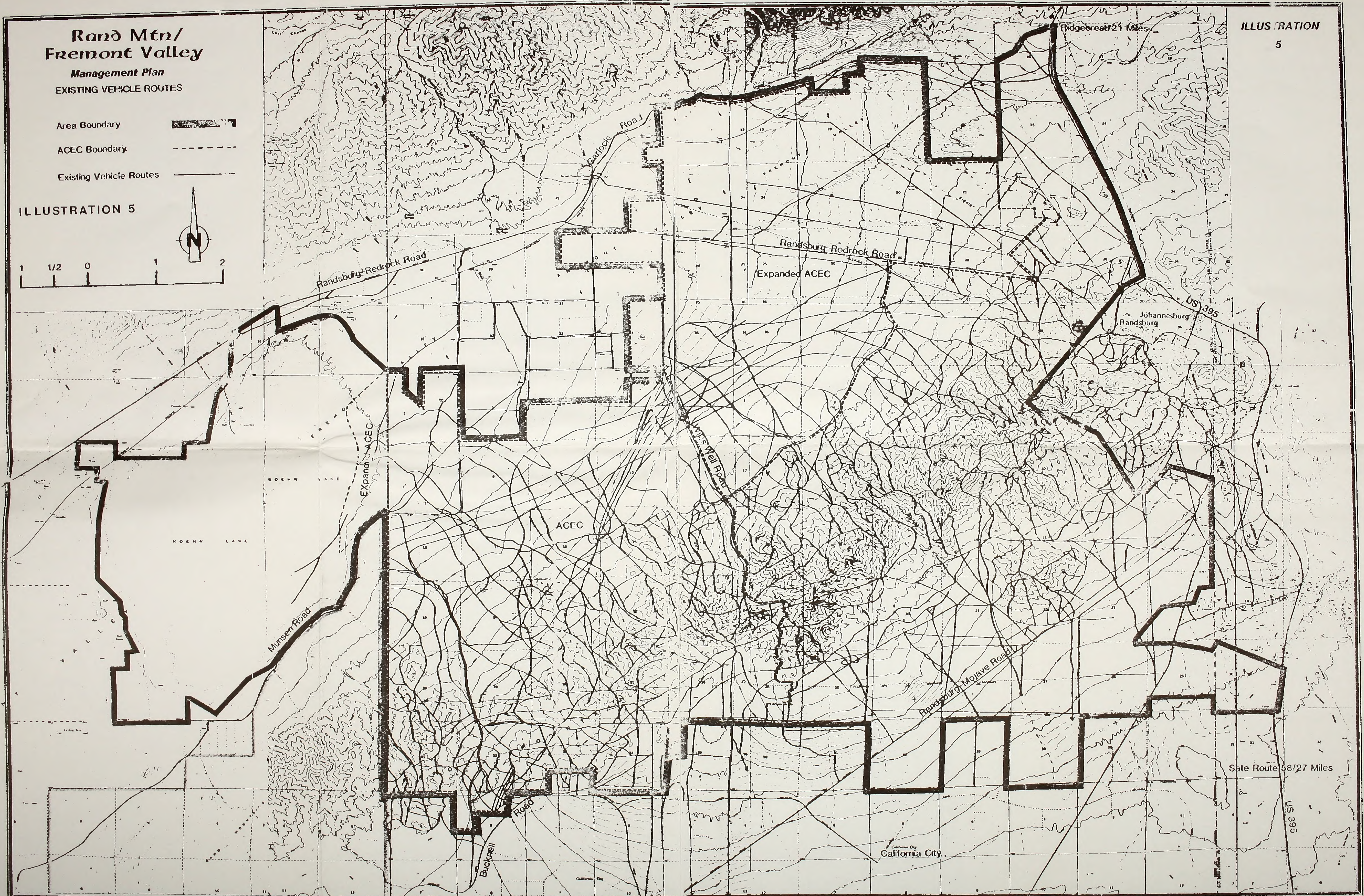
Existing Vehicle Routes

ILLUSTRATION 5



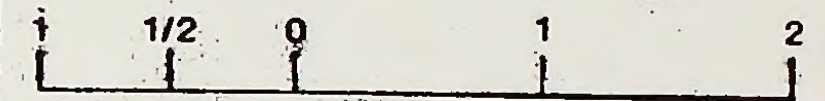
ILLUSTRATION

5



PROPOSED ACCESS

Designated Open Vehicle Route RO 341



March 26, 1979
C.L.W.

